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MEDICAL EDUCATION AND THE MIDWIFE PROBLEM IN THE UNITED STATES*

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When requested by the Chairman of the Committee on Midwifery of the Association for the Study and Prevention of Infant Mortality to prepare a paper on the midwife problem, I felt that important information on the subject might be elicited by interrogating the teachers of obstetrics throughout the country. Accordingly, I prepared a questionnaire, containing some fifty questions, which is appended, and which was sent to the professors in the 120 medical schools giving a full four-year course. Forty-three professors, representing schools in every section of the country, were good enough to reply.

As some of the queries were decidedly personal in character, I promised not to mention the names of those replying, or the schools with which they are connected; but at the same time I stated that I should feel free to use whatever information might be supplied. It is with great pleasure that I take this opportunity to thank those who replied for their courtesy and frankness, and at the same time to express the hope that their cooperation has not been in vain, as I feel that it will bear fruit by arousing general interest, not only in the midwife problem, but also in the much broader question of medical education, by showing that we have as yet failed to train practitioners competent to meet the emergencies of obstetrical practice.

While the responses were not so general as might be desired, they are nevertheless sufficiently numerous to give a fair idea of the conditions existing throughout the country. Thirty-one replies came from the sixty-one schools which are designated as "acceptable" by the Council on Medical Education of the American Medical Association, as compared with eleven from the fifty-nine non-acceptable schools, not including one from Canada. The forty-three schools replying may be classified as follows:

Eleven of the twenty-three schools demanding two or more years of college work for admission.

Four of the twelve schools demanding one year of college work.

Sixteen of the other twenty-six acceptable schools requiring four years of high-school work.

Eleven of the fifty-nine non-acceptable schools.

One of the acceptable Canadian schools.

The one favorable general impression which I obtained from the entire series of replies is that the forty-three professors of obstetrics who made them constitute a body of unusually frank and truthful men; as otherwise they would scarcely admit the existence of such a condition of affairs as their replies seem to indicate. For many years I have regarded the general attitude toward obstetrical teaching as a very dark spot in our system of medical education, and the majority of the replies to my questionnaire indicate that my pessimism was more than justified. Briefly stated, they indicate (a) that many professors are inadequately prepared for their duties and have but little conception of the obligations of a professorship; (b) that a considerable proportion are not competent to cope with all obstetrical emergencies; (c) that nearly all complain that their teaching and hospital equipment is inadequate for the proper training of students; and (d) most serious of all, that a large proportion admit that the average practitioner, through his lack of preparation for the practice of obstetrics, may do his patients as much harm as the much-maligned midwife.

THE PRESENT STATUS OF OBSTETRICS

In the first part of this report I shall attempt to set forth the condition of affairs as revealed by my questionnaire; while in the second part I shall venture to indicate some of the reforms necessary to place obstetrical teaching on a proper basis, and incidentally touch on certain features of the midwife problem, in an attempt to indicate how the public may obtain better obstetrical treatment. With this in mind, I shall take up separately each question of the questionnaire, and after giving the gist of the replies as objectively as possible, I shall make whatever critical remarks I may consider indicated. It is scarcely necessary for me to state that I have endeavored to reproduce faithfully the statements of my collaborators, for which I am in no way responsible; while my own views, and possibly my prejudices, will appear in the latter part of the report.

QUESTIONS I TO IV

These need not be considered, as they were asked only for purposes of orientation.

QUESTIONS V AND VI

Are you engaged in general practice, or do you limit your work to gynecology and obstetrics, or to obstetrics alone?

Seventeen professors replied that they were in general practice in addition to their college duties; twenty-one that they limited their work to obstetrics and gynecology, and five others solely to obstetrics. Accordingly, considerably more than one-third of the professors, including four in the so-called high-standard schools, are not specialists in any sense, and owing to the obliga-

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* Owing to the length of this article, about one-half is omitted from THE JOURNAL. The complete article appears in the author's reprints, a copy of which will be sent by the author or by THE JOURNAL on receipt of a stamped, addressed envelope.

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tions of a large general practice have not sufficient leisure to become thoroughly versed in all of the problems of obstetrics and must necessarily take their professorial duties lightly. Moreover, five professors, including three in high-standard schools, limit their work exclusively to obstetrics; and as several of them admit that they are not competent to perform major operations, it is apparent that they cannot be ideal teachers.

QUESTION VII

Did you serve as a hospital assistant or intern immediately following graduation?

To this question, fifteen professors, including three in high-standard schools, answered in the negative, seventeen replied that they had served for less than one year, and eleven for a longer period.

At first glance this appears far from satisfactory, but when it is remembered that many of the professors graduated twenty or more years ago, it is not quite so poor, as at that time the facilities for serving as an intern in a general hospital were much more limited than at present. Consequently, it merely indicates that many of our professors did not receive rigorous hospital training in their youth, but gained their practical experience almost exclusively from private practice.

QUESTION VIII

Why did you take up obstetrics?

The forty-one answers to this question may be divided into four categories. Eight professors deliberately chose obstetrics as their life work and endeavored to obtain as ideal a training for its pursuit as possible. Thirteen stated that they were always interested in the subject, and nine that they were very much interested before taking it up seriously. On the other hand, eleven stated that chance alone led them to teach this branch of medicine. Several accepted the professorship merely because it was offered to them, but had no special training or liking for it, while others succeeded to it after having taught various other branches with more or less success.

QUESTION IX

What was your preparation for teaching?

Prior to assuming their professorial duties, twenty-one, or slightly less than one-half of the entire number of professors, served for varying periods in lying-in hospitals. In eleven instances the service varied from one to five months, in five it extended over six months, while in five others it covered one or more years.

Such a confession appears highly depressing, but on further consideration it must be admitted that it is about what might be expected in this country; as twenty-five of the professors graduated twenty or more years ago, when very few lying-in hospitals were in existence, and those poorly equipped and offering but slight opportunity for clinical observation. Such conditions, however, are in marked contrast with those obtaining in Germany and France, where the first requirement for a professorial career is a long period of preparation in a well-equipped lying-in hospital with abundant clinical material. At the same time, it must be noted that the preparation of a considerable number of our professors was augmented by service for varying periods in more or less well-organized out-patient departments.

Even more serious than the lack of rigorous hospital training, is the appallingly slight experience which many had before being appointed to professorships. The replies indicate that only nine of the entire number had seen 1,000 or more cases of labor, and twenty-two others considerably less, while eleven obtained their practical experience solely from an indefinite number of cases in private practice. Moreover, it is interesting to note that one professor admits that he had never seen a woman delivered before assuming his professorship, while five state that they had seen less than 100 cases, and thirteen others less than 500 cases.

Think of becoming a professor of obstetrics with an experience of less than 100 cases!

After considering the answers to this question, I think that it is difficult to avoid the conclusion that the majority of our professors entered on their duties with a comparatively poor equipment from a practical point of view, while their attainments in the underlying sciences were usually extremely faulty.

QUESTION X

Have you studied abroad?

The replies show that twenty-four of the forty-three professors have visited Europe, of whom fourteen, or one-third of the entire number, worked for three months or more in some well-organized clinic. This is a fairly satisfactory showing, and indicates that many of our professors were not satisfied with their home training, which they attempted to supplement by further work in well-equipped European clinics.

QUESTION XI

Is a lying-in hospital connected with your school?

The answers to this question are in general very depressing, and show that six schools have no connection with a lying-in hospital. Of the other thirty-seven, nine have hospital accommodations for less than 100 patients per year, fifteen for more than 100 but less than 250, four for 250 but less than 500; and nine for 500 or more patients per year, including two schools with accommodations for over 1,000 patients. These figures indicate that most schools are very poorly equipped in this regard, as only nine have anything like adequate clinical material for the instruction of their students. Moreover, with a few exceptions, even the best of our lying-in hospitals are vastly inferior, as far as the number of patients and equipment for teaching are concerned, to the clinics in the smaller German universities.

Twenty of the thirty-seven lying-in hospitals are owned and controlled by the school with which they are connected. Apparently, a most excellent showing; but closer examination shows that the conditions are not so ideal, as seven of the college-controlled hospitals have less than 100 deliveries per year, and only five out of the entire number more than 250.

In order to give an idea of the deplorable dearth of clinical material, I have tabulated the figures from ten of the smaller lying-in hospitals with from twenty-five to 125 deliveries per year, including two connected with high-standard schools. Together they have only 553 cases for the instruction of 575 students; and when it is remembered that, owing to the long summer holiday and other causes, practically one-half of the cases are lost for purposes of instruction, it is apparent that each student on an average has an opportunity to see only one woman delivered, which is manifestly inadequate. Moreover, the conditions are only slightly better, when the combined facilities of all of the twenty hospitals owned by the medical colleges are considered, as together they present a total of 5,655 deliveries per year for 1,400

students requiring clinical instruction, which means an average of only four cases per student.

Naturally, such calculations do not accurately represent the actual facts, as they are based on the supposition that only two students see and examine each woman in labor. Moreover, in certain schools the number of cases available is considerably less than the average, while in others it is greater. The actual figures show that in twenty-five schools each student sees three cases or less, in nine schools four to five cases, and in eight others five or more cases; while in some of the smaller hospitals this is possible only by having four to six students examine each patient, thereby subjecting her to unjustifiable risk of infection. Accordingly it would appear that in only eight of the medical schools under consideration do the students have an opportunity to witness anything like a satisfactory number of deliveries under appropriate clinical conditions. On the other hand, ambitious students may see a greater number of cases provided they are willing to work in their own schools during the summer months, or can afford to take a course in one of the large institutions, such as the New York Lying-In Hospital, which are not connected with a medical school.

Turning from the actual number of cases available for clinical instruction, to the opportunities afforded for training assistants, who should become the professors of the future, it is difficult to speak too strongly. In the thirty-seven lying-in hospitals under consideration, it is apparent that this function is in great part neglected, as is shown by the fact that the period of service is usually too short to permit of training well-rounded men. Thus, in thirteen institutions the assistants serve for periods varying from one to six months; in four for six months or more but for less than one year; in fifteen for one year; and in only five for a longer period, including two in which the service extends over four years. Consequently, it may be said that proper training can probably be afforded only in the five schools in the latter group, as in my experience assistants at the end of the first year are just beginning to be useful and are able to make a correct diagnosis only in the simpler cases, so that even with a comparatively large material, their experience is relatively so slight that they are not prepared to cope with serious emergencies even when they are recognized.

QUESTION XII

Do you maintain an outdoor obstetrical service?

The following answers were received: Five, none; six, small services without data as to number of patients; sixteen, with less than 250 deliveries; six, with between 250 and 500 deliveries; five, with between 500 and 1,000 deliveries; and five, with 1,000 or more deliveries per year.

At first glance these figures appear much more satisfactory than those for lying-in hospitals, as they show that ten of the schools have a fair out-patient material. At the same time, I have learned from my own experience that the value of such a department for teaching purposes is dependent on so many factors that the mere number of women cared for gives no idea of its adequacy. In order to be efficient for teaching, an out-patient service must be held in rigid discipline, be organized as an integral part of the regular obstetric service, and conducted through the lying-in hospital. Moreover, the students should not be sent to the homes of the patients alone, but should always be accompanied by an assistant to demonstrate the case, as well as by a trained nurse to prepare the patient properly and to render her surroundings as sanitary as possible.

In order to give an approximate idea of the total amount of clinical material available, I have calculated the total number of ward and out-patient cases in the various schools, on the supposition that two students see and examine each indoor, and one student each out-door patient. The following table shows a progressive decrease in the number of cases in each of the four groups, according as the schools require for entrance two years, or one year of college work, or merely a high school education, or less:

I. 10 cases to each student, with extremes of 2 and 21 cases
II. 7 cases to each student, with extremes of 3 and 10 cases
III. 6 cases to each student, with extremes of 1 and 27 cases
IV. 3 cases to each student, with extremes of 0 and 12 cases

At the same time, it must be admitted that the average for the first group is considerably too high, which is due to the fact that one of the schools in this category has an immense hospital and outdoor service.

QUESTION XIII

What are your relations with the gynecologic service both in the medical school and the hospital?

Answers obtained from forty-two schools show that in twenty-four there is no cooperation, in five cordial cooperation, while in thirteen the two departments are more or less closely united. In the last category, the chairs of obstetrics and gynecology are united in eight schools; in two the chairs are separate but are held by the same incumbent; while in three the professor has a joint hospital service, but teaches only obstetrics.

From the standpoint of training students and assistants, such a lack of cooperation is greatly to be deplored, more particularly as it prevents the development of broad-minded professors, who are able to cope with all complications arising from the female generative tract. In hospitals in which there is no cooperation between the two departments, the obstetrician is generally looked down on by the gynecologist and is usually afforded markedly inferior facilities for his work. From my own experience, both in this country and abroad, I am convinced that it is essential that the obstetrician be a competent surgical operator; and, as the number of radical operations in obstetrics is comparatively limited, the most natural method of obtaining the requisite facility is by means of gynecologic surgery. I hold that one may be a fair gynecologist with only an elementary knowledge of obstetrics, but that no one can be a competent obstetrician without being at the same time a trained gynecologist. For these reasons, I consider from the standpoint of teaching that the schools in which the two chairs are fused will possess a considerable advantage.

QUESTION XIV

Are you competent to operate on any complications arising from the female generative tract?

To this thirty-five professors answered "yes," and eight "no"; and these figures I imagine, are much more favorable than the actual facts. Several professors frankly admit that they are not prepared to perform Cesarean section.

Consider that such a condition of affairs means that the professor is merely a man-midwife who is unable to carry a complicated case of labor to its legitimate con-

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elusion! Or, imagine the effect on a patient, who places herself in the hands of a professor of obstetrics in a respectable medical school, when she is told that he can conduct the case satisfactorily if it is ended by the unaided efforts of Nature, or merely requires some slight interference, but in case radical interference is demanded he will be obliged to refer her to a gynecologist or surgeon. Think of the impression such an admission must make on the student, who cannot be blamed for believing that obstetrics is a pursuit unworthy of broadly educated men, but is suitable only for midwives or physicians of mediocre intelligence. This is not the place to go into the details of this question, but I have no hesitation in asserting that a professor of obstetrics who is not prepared to perform a Cesarean section or other radical operation is not competent to undertake the care of a case of labor complicated by pelvic contraction, and is not fitted to teach modern obstetrics.

QUESTION XV

Can you care for a case of ruptured uterus, advanced extra-uterine pregnancy or excision of the pelvic veins, as well as your gynecologic confrère?

To this thirty-two respondents answered "yes," and eleven "no." If one-fourth of the professors, including three in the high-class schools, make such an admission, it is safe to assume that a much larger number should be included in the same category. Moreover, when it is recalled that seventeen professors are engaged in general practice, and that five more limit their attention solely to obstetrics, and accordingly have but little opportunity to perfect themselves in operative technic, it is safe to assume that at least one-half of those replying to the questionnaire are unable to cope satisfactorily with these legitimate obstetrical complications.

QUESTION XVI

Do you consider your hospital and teaching equipment satisfactory?

To this fourteen respondents answered "yes," and twenty-nine unhestitatingly "no." In other words, the professors in two-thirds of the schools frankly admit that the conditions are highly unsatisfactory. If this were all it would be a grave admission; but the actual conditions are worse, and there is no justification for many of the affirmative answers.

I think that I am fairly conversant with the existing conditions, and as far as I know there is only one medical school in the country which is properly equipped for teaching obstetrics and gynecology along the lines of a well-conducted German woman's clinic. And I regret to say that it is not at the Johns Hopkins Hospital, whose lying-in department is very inferior, and far below the standard maintained by the other departments of that institution. At present, plans are being perfected in one of the eastern cities for the construction of an almost ideal woman's clinic, but unfortunately, it will be merely affiliated with, and not controlled by, the medical school. Three other fair-sized and well-equipped lying-in hospitals are also affiliated with medical schools, but are equipped only for practical clinical work and not for investigation.

On the other hand, in my opinion the favorable verdict concerning the equipment of the other nine schools is unjustifiable, and the fact that it is designated as satisfactory shows to what a slight extent many professors comprehend the obligations of a teaching position. A few examples will, I think, make this contention clear. One so-called satisfactory clinic has only thirty-five cases a year for the instruction of forty students. In three others the period of service for the assistants is, respectively, one and one-half, three and six months. Another lying-in hospital has no free beds, and the clinical instruction is given entirely in a large out-patient service. In a sixth "satisfactory" school the professor admits his inability to do a Cesarean section; in still another the director knows so little of his department that he is unable to give the number of beds under his control; and finally, the last school in this category stands low in the non-acceptable list, and is notorious for its poor equipment and the frequent failure of its students before state boards throughout the country.

QUESTION XVII

What is necessary to make your equipment satisfactory?

Leaving out of consideration the fourteen "satisfactory" schools just mentioned, the answers reveal an extremely depressing condition of affairs. On this occasion it would lead us too far afield to enter into details, but I imagine that the mere enumeration, under the following headings, of the main needs mentioned will suffice to prove that the conditions are far from ideal:

A. Need everything.
B. Need a lying-in ward.
C. Need a lying-in ward controlled by the school.
D. Need accommodations for more patients.
E. Need more intelligent assistants who serve for longer periods.
F. Need more money for current expenses or endowment.
G. Need better-prepared students.

On the other hand, no one mentioned the need of broad-minded, scientifically trained teachers, or of properly equipped laboratories for investigative work.

QUESTION XVIII

Have you ever trained a man who, you felt, was competent on leaving you to become professor of obstetrics in a first-class medical school?

Twenty-six respondents answered in the negative, while one naively replied "that he had never been called on to do so." On the other hand, seventeen professors answered in the affirmative, and several stated that they had trained a number of men of professorial caliber. As so imposing an output was somewhat of a surprise to me, I analyzed the replies with some interest.

If the figures are correct, it is pertinent to inquire what has become of the young professors! I do not know where they are located; and, as there are not seventeen first-class medical schools in the country, the discrepancy is explicable only on the supposition that many died in early youth, or that the respondents overestimated their attainments. Furthermore, it is interesting to inquire where they received their training and who were their teachers. As has already been indicated there are only five lying-in hospitals which keep their assistants for longer than one year; consequently, as it is hardly possible to train a competent professor in a shorter time, it must follow that most of them must have received their training in these schools, which is unlikely.

Again, it may be asked whether all of the seventeen professors giving positive answers are competent to train such men. This also does not appear probable; for, although I have been a close student of medical literature for the past twenty years, I do not recall having

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seen an article, good, bad or indifferent from five of them; and it is highly improbable that totally unproductive men would be able to stimulate young men to become excellent professors. Moreover, in some instances it would have been impossible for them to have obtained their knowledge from the obstetrical clinics of their own school, as less than 100 patients are delivered per year in four of the hospitals concerned, while one has only twenty-five patients. Furthermore, one is connected with a most notorious non-acceptable school, and several more, to my knowledge, are poorly equipped in buildings, clinical material and facilities for investigation. On the other hand, it is a pleasure to admit that a small number of the schools are doing good work in this direction and have turned out several men of really first-rate professorial caliber.

The replies in general are very discouraging, as they indicate, in the first place, that it is usually impossible for ambitious young men to obtain in the schools from which they graduate anything like sufficient opportunity to equip themselves for a teaching career; and, in the second place, they force us to conclude that many professors take their duties very lightly, and have but little conception of the obligations connected with a properly conducted professorship. If this is the case, is it not absurd to expect such men to inspire students with a proper conception of obstetrics, or to deserve and maintain the respect of members of their own faculty, or of the profession in the neighborhood in which they live?

QUESTION XIX

Do you consider that the ordinary graduate from your school is competent to practice obstetrics?

Eleven teachers, or one-quarter of the entire number, promptly answered "no"; while the remainder replied in the affirmative, although in many instances in a somewhat qualified manner. Thus, one replied: "Well, yes in a way; that is, some of them." It appears to me that the affirmative answers, as a rule, are more positive the poorer the school and the smaller its clinical material. That this is not an exaggeration is shown by the fact that affirmative replies came from several of the schools without lying-in hospitals, as well as from two others with only twenty-five cases per year available for the instruction of fifty students.

At the same time, most of the teachers qualify their affirmative answers by stating that their graduates are competent to conduct normal cases, while several others designate them as fairly efficient men-midwives. Moreover, most of them admit that their graduates are not competent to conduct operative labors, while several state that they deteriorate rapidly in technic after leaving the medical school.

After eighteen years' experience in teaching what is probably the best body of medical students ever collected in this country—the student body at the Johns Hopkins Medical School for the year 1911-1912, being made up of graduates from one hundred and twenty-eight colleges and universities in this country and Europe—I would unhesitatingly state that my own students are unfit on graduation to practice obstetrics in its broad sense, and are scarcely prepared to handle normal cases.

QUESTION XX

What proportion of labor cases in your city are attended by midwives?

The replies indicate great variations in different localities. Midwives are almost unknown in Montreal, and I am informed that only twenty-five practice in Boston. On the other hand, in most of our large cities including New York, Chicago, St. Louis and Atlanta, they conduct from 40 to 60 per cent. of all labor cases.

In regard to their licensure, eight teachers pleaded ignorance of conditions, while twenty-five stated that they were licensed and ten that they were not.

Concerning their necessity, there was still a wider divergence of opinion. Twelve professors replied that they did not possess sufficient data to justify an expression of opinion; while of the thirty-one giving positive answers, fifteen stated that they were necessary and sixteen not.

After analysis of the replies to this question, it is apparent that midwives attend many cases in most of our large cities, but that their employment is dependent on local conditions rather than general necessity; as is shown by the replies from Boston and Montreal. In most localities some attempt is made to control them in a feeble way, but nowhere effectively, while the teachers of obstetrics throughout the country are about equally divided as to their necessity.

QUESTION XXI

Do you believe that more women die from puerperal infection in the practice of midwives or of general practitioners?

This question, as well as the one immediately following, cannot be answered with accuracy; consequently the replies must be taken as the general impression of the respondents, rather than as precise statements based on exact statistics. In order to draw perfectly correct conclusions, many factors would have to be considered, concerning which accurate information is not at present available.

Consequently, as the replies represent merely the general impression of the various respondents, they are subject to many fallacies and are thereby greatly reduced in value. Nevertheless they are of great interest and are as follows: Eight teachers replied that they did not possess sufficient data on which to base an opinion; while of the thirty-five who answered, fifteen stated physicians, thirteen midwives and five that the death-rate is almost equal.

Accordingly, it appears that somewhat more than one-half of the teachers replying consider that general practitioners lose proportionately as many women from puerperal infection as do midwives. Even if based on somewhat faulty premises, such a conclusion is appalling, and is a railing indictment of the average practitioner and of our methods of instruction in obstetrics, more particularly as one of the main arguments urged against the midwife is the prevalence of infection in her practice.

QUESTION XXII

Do as many women die as the result of ignorance, or of ill-judged and improperly performed operations, in the hands of general practitioners, as from puerperal infection in the hands of midwives?

The same objection applies to this as to the former question, and consequently the answers must be regarded merely as the general impression of the respondents, some of whom are necessarily biased in their opinions. Eight teachers state that they are not prepared to answer the question; while of the thirty-five who do so, twenty-six answer against the general practitioner, six against the midwife and three hold that the two are equally bad. Moreover, many direct attention to the unnecessary death of large numbers of children, as the

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result of unnecessary or improper operating, and from the failure to recognize the existence of contracted pelvis.

If it appears necessary to reform anything, here is the opportunity. Why bother about the relatively innocuous midwife, when the ignorant doctor causes quite as many absolutely unnecessary deaths? From the nature of things, it is impossible to do away with the physician, but he may be educated in time; while the midwife can eventually be abolished, if necessary. Consequently, we should direct our efforts to reforming the existing practitioner, and to changing our methods of training students so as to make the physician of the future reasonably competent.

QUESTION XXIII

How do you consider that the midwife problem can best be solved?

Thirty-four answers to this question gave the following result: Eighteen advocated the regulation and education, and fourteen the abolition of midwives, while one advocated that the question be left *in statu quo*, and another held that the only solution lay in better-trained doctors.

On analyzing the replies several interesting facts were elicited. Thus, a thoroughly competent professor in one of the large western cities, in which more than one-half of all labors are conducted by midwives, states that, although the smaller portion of the obstetrical work in his city is in the hands of physicians, his experience forces him to conclude that the latter nevertheless lose from infection many more women than do the midwives.

Again, one of the respondents from New York City states that owing to the extension of lying-in charities, midwives now attend many less women than formerly, notwithstanding the rapid increase in the population of the city. A similar statement comes from Cincinnati, where, without stringent regulation, the number of women attended by midwives has decreased from 70 per cent. in 1880 to 30 per cent. in 1909, thus tending to indicate that prolonged residence in this country gradually overcomes the prejudices of our foreign-born population against the employment of physicians.

Those who advocate regulation and education vary greatly in their ideas, some advocating mere general regulation, while others demand extensive education in properly equipped hospitals, as in Germany and Italy, with constant supervision by the board of health, which should have power to revoke licenses whenever necessary.

Equally divergent arguments are advanced by those favoring the abolition of midwives. One group regards as hopeless any attempt to train them efficiently, while another holds that they may be entirely done away with by educating the laity, by extending lying-in charities, and by supplying better doctors and cheaper nurses; while my own views will be expressed in the second part of the paper.

QUESTION XXIV

Can you suggest any practicable method of improving the general standard of practical obstetrics outside of hospitals?

The mere fact that all but two of those answering my questionnaire make definite suggestions in this regard, offers further proof of the deplorable condition of obstetrical education and practice, and indicates the urgent need for reform.

It would lead too far to consider all of the suggestions in detail, and I shall content myself by enumerating the main ones, which are so arranged as to indicate the order of frequency in which they were made:

1. Better teaching and more abundant lying-in hospital accommodations.
2. Instruction of the profession and laity that obstetrics is surgery, and that its major operations are as serious as laparotomies.
3. Education of the laity concerning existing conditions and insistence that the proper place for major obstetrics is a well-conducted hospital.
4. Regulation of obstetric practice by the state boards of health, which should grant a provisional license to practitioners, revocable on demonstration of incompetency or neglect.
5. Better education of practitioners. A number of respondents do not believe that the present generation can be materially improved.
6. Teaching both doctors and the laity that the ordinary practitioner should attend only normal cases, and should refer the abnormal ones to specially trained men connected with well-equipped hospitals.
7. Better pay for practitioners doing general obstetric work, as it is held that it is useless to expect expert care for compensation which is generally regarded as adequate.
8. The collection and general dissemination of accurate statistics concerning the mortality of childbirth, as well as the injuries and illness which result from improper care.
9. Elevation of the importance of obstetrics in the eyes of practitioners, medical students and the laity.
10. Marked extension of obstetric charities and well organized lying-in hospitals.
11. Greater development of visiting nurses for those of moderate means, and the education of trained helpers to carry out their directions.
12. Differentiation of students into classes, one of which should be educated as men-midwives, and the other as broadly-trained obstetricians.

I am convinced that no fair-minded person who is interested in the welfare of the women and children of our country, or in the problems of medical education, can read the foregoing analysis without feelings of profound depression, or without admitting that we are facing a condition urgently in need of reform.

The replies clearly demonstrate that most of the medical schools included in this report are inadequately equipped for their work, and are each year turning loose on the community hundreds of young men whom they have failed to prepare properly for the practice of obstetrics, and whose lack of training is responsible for unnecessary deaths of many women and infants, not to speak of a much larger number, more or less permanently injured by improper treatment, or lack of treatment. Moreover, the spontaneous admission by most of the respondents that poor training of medical men is responsible for many unnecessary deaths in childbirth, forces us to acknowledge that improvement in the status of the midwife alone will not materially aid in solving the problem.

A priori, the replies seem to indicate that women in labor are as safe in the hands of admittedly ignorant midwives as in those of poorly educated medical men. Such a conclusion, however, is contrary to reason, as it would postulate the restriction of obstetrical practice to the former, and the abolition of medical practitioners, which would be a manifest absurdity.

The fault lies primarily in poor medical schools, in the low ideals maintained by inadequately trained professors, and in the ignorance of the long-suffering general public.

SUGGESTED REMEDIES

What is the remedy for these conditions? I shall enumerate some of them, but their mere number indicates how serious the problem is, and how impossible it

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will be to consider them all adequately at the present time.

Some of the necessary reforms are:

I. Better and properly equipped medical schools.
II. Higher requirements for the admission of students.
III. Scientifically trained professors of obstetrics with high ideals.
IV. General elevation of the standards of obstetrics.
V. Education of medical practitioners.
VI. Insistence by state examining boards on better training before admitting applicants to practice.
VII. Education of the general public.
VIII. Development of lying-in charities.
IX. Cheaper nurses.
X. Possibly the training of midwives.

SUMMARY AND CONCLUSIONS

A questionnaire containing some fifty questions concerning obstetric education and the midwife problem was sent to the professors of obstetrics throughout the country. Forty-three replies were received, representing one-half of the acceptable and one-fifth of the non-acceptable medical schools, which indicate a most deplorable condition of affairs, briefly as follows:

1. Generally speaking the medical schools are inadequately equipped for teaching obstetrics properly, only one having an ideal clinic.

2. Many of the professors are poorly prepared for their duties and have little conception of the obligations of a professorship. Some admit that they are not competent to perform the major obstetric operations, and consequently can be expected to do little more than train men-midwives.

3. Many of them admit that their students are not prepared to practice obstetrics on graduation, nor do they learn to do so later.

4. One-half of the answers state that ordinary practitioners lose proportionately as many women from puerperal infection as do midwives, and over three-quarters that more deaths occur each year from operations improperly performed by practitioners than from infection in the hands of midwives.

5. Reform is urgently needed, and can be accomplished more speedily by radical improvement in medical education than by attempting the almost impossible task of improving midwives.

6. In my opinion the following reforms are most important:

A. Reduction in the number of medical schools, with adequate facilities for those surviving, and higher requirements for admission of students.

B. Insistence in university medical schools that the head of the department be a real professor, whose prime object is the care of hospital patients, the proper training of assistants and students and the advancement of knowledge, rather than to be a prosperous practitioner.

C. Recognition by medical faculties and hospitals that obstetrics is one of the fundamental branches of medicine, and that the obstetrician should not be merely a man-midwife, but a scientifically trained man with a broad grasp of the subject.

D. Education of the general practitioner to realize that he is competent only to conduct normal cases of labor, and that major obstetrics is major surgery, and should be undertaken only by specially trained men in control of abundant hospital facilities.

E. The requirement by state examining boards that every applicant for license to practice shall submit a statement certifying that he has seen delivered and has personally examined, under appropriate clinical conditions, at least ten women.

F. Education of the laity that poorly trained doctors are dangerous, that most of the ills of women result from poor obstetrics, and that poor women in fairly well-conducted free hospitals usually receive better care than well-to-do women in their own homes; that the remedy lies in their hands and that competent obstetricians will be forthcoming as soon as they are demanded.

G. Extension of obstetric charities — free hospitals and out-patient services for the poor, and proper semi-charity hospital accommodations for those in moderate circumstances.

8. Greater development of visiting obstetric nurses and of helpers trained to work under them.

9. Gradual abolition of midwives in large cities and their replacement by obstetric charities. If midwives are to be educated, it should be done in a broad sense, and not in a makeshift way. Even then disappointment will probably follow.

1128 Cathedral Street.

A TYPHOID BACILLUS-CARRIER OF FORTY-SIX YEARS' STANDING, AND A LARGE OUTBREAK OF MILK-BORNE TYPHOID FEVER TRACED TO THIS SOURCE

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Toward the end of August, 1909, a sudden increase in the number of cases of typhoid fever reported from the boroughs of Manhattan and the Bronx attracted attention, and led to an investigation to ascertain the cause of the infections. A rapid survey of the cases showed that a certain milk-supply was common to almost all, and accordingly, September 1, the suspected supply was shut off. From the infections which had already occurred, however, additional cases came to be reported all through September, the total number belonging to this outbreak finally numbering several hundred. Some idea of the havoc wrought by this infection can be obtained by a glance at Table 1, in which are shown the cases of typhoid fever reported, week by week, in each ward, commencing August 1, and (in parenthesis) the average normal incidence of typhoid fever for the ward, based on the experience of the previous five years.

From this table it is apparent that the outbreak was limited to the Nineteenth, Twenty-Second and Twelfth Wards in Manhattan and affected both wards of the Bronx. The Nineteenth Ward embraces all the east side from Fortieth to Eighty-Sixth Street. The Twenty-Second Ward embraces the similar district on the west side, and the Twelfth Ward embraces all of Manhattan north of Eighty-Sixth Street, both east and west. In other words, the outbreak affected the city in the district from Fortieth Street north. By locating the cases on a map it was found that the west side was relatively much less affected, the main portion of the outbreak

being localized on the east side of Manhattan beginning about Sixtieth Street and extending northward into the Bronx.

Comparing the cases actually reported with the normal incidence for the period in question, we find that there were some 380 cases more than the average normal. Practically all of these were in some way chargeable to the milk infection already mentioned, though, of course, some were cases secondarily infected in the city.

On tracing the source of infection back, through the wholesale dealer to the shipping station in the country, it was found that the infected milk came from Camden, N. Y. In fact, the former manager of the creamery there was ill with typhoid fever at the time of inspection, and, judging from the date of onset, was apparently also one of the victims of the infection and not the cause of it. There had also recently been a case of typhoid fever on the dairy farm of X., one of the three local milk-dealers of the village, but not a patron of the creamery. Further inquiry showed that there had been an undue prevalence of typhoid fever in Camden for years; in fact, it was called by several physicians "Camden fever" and believed not to be typhoid fever at all. It is safe to say that the number of cases of typhoid fever in the village has not averaged less than fourteen or fifteen each year, which is at the rate of fifty or sixty per 10,000 of population. The figures for New York City during this time have fluctuated between six and ten per 10,000 of population. A tabulation of all the cases occurring in the village in 1908 and 1909, twenty-seven in number, showed that twenty received milk from Dairy X., three from Dairy Ct., and three from Dairy Cm., while one received milk from "own cow."

Investigation of the dairy and home of Dairyman X. showed both to be exceptionally clean and well kept. The medical history of the dairyman's family was closely inquired into and proved extremely interesting. Briefly it was as follows:

Dairyman X., born in Wisconsin in 1848, and had typhoid fever there in 1863 or 1864. Came to Camden in 1866; married in 1871; began to sell milk, from same dairy as at present, in 1873.

1878:—His two-year-old daughter had "enteric fever." Illness lasted about two weeks; she lost much weight and "came near dying." During this girl's convalescence the grandmother who had nursed her, became very ill. She was delirious for three weeks. The disease was called "gastric fever."

1886:—The present son-in-law, then living on the farm as hired man, was very ill with fever lasting several weeks. Diagnosis, "gastric fever."

1893:—Another daughter was ill in the fall of the year: Diagnosis was "typhoid fever."

1897:—Still another daughter had what was called "intermittent fever" in the fall of the year. "It was a slow fever; she was sick in bed every day for about two or three weeks." (There were no intermissions, no chills, and no sweating.) During convalescence she sickened again, and this second attack lasted four or five weeks, during which time the patient was very ill.

1903:—A hired man left the farm to take lighter work and developed what was called "typhoid fever" ten days after leaving the farm.

1909:—Another hired man became ill with typhoid fever, July 20, and died August 7. Infection was contracted on the farm.

With such a history one could not help but suspect the presence of a chronic bacillus-carrier, and accordingly specimens of stool were obtained from the entire household. Those of the dairyman developed almost a pure culture of typhoid bacilli on Conradi-Drigalski plates. Subsequent examinations made after a month and again after a year yielded similar results.

It now remained to establish the connection between this dairy and the creamery shipping milk to New York. This was finally found to be the following: Dairyman X. lives about one-quarter mile outside the village limits; his son-in-law, who also runs a dairy and who takes his milk to the creamery, lives across the road, a little nearer the village, so that Dairyman X. always passes there on his way to the village with milk. Returning from his route with a few quarts of milk left over, it was perhaps quite natural that Dairyman X. should stop at his son-in-law's and ask the latter to include it with the milk taken to the creamery, and to give him credit for the amount thus turned in. Some days there was no milk left over; on other days there were a few quarts. It was established that milk was thus received from the X. dairy during the month preceding the onset of the city cases, and there is practically no doubt that this constituted the chain of infection. It is, of course, impossible to trace exactly what part the recent case of typhoid fever on the X. farm had in infecting the milk. This patient was ill from July 20, and died August 7; the city cases began about the middle of August, and continued heavily until shortly after September 1, with a considerable number having onsets during the first three weeks of September. Whatever part the recent case had, it is obvious that the prime cause of the cases of typhoid fever, both those developing year after year in Camden and those of the large outbreak in New York, was Dairyman X., the chronic bacillus-carrier.

Attention is called to the fact that the milk was shut out within a very short time after the outbreak began. It will be seen from the tabulation that the increase

TABLE 1.—CASES OF TYPHOID FEVER REPORTED BY WEEKS AND WARDS

Week Ending (1909)	Manhattan																				Bronx	
	1	2	3	4	5	6	7*	8	9	10	11*	12*	13	14	15	16	17	18	19	20	21	22	23	24
8/7	.	.	.	.	.	.	(2.0)	.	1	.	2(1.3)	7(10)	.	1	.	3	2(2.6)	1	2(5)	8(2.1)	1	3(5)	3(5)	(2)
8/14	.	.	.	.	.	.	1(2.0)	.	1	.	2(1.2)	9(10)	.	1	.	.	1(2.2)	.	1(6)	3(3.7)	.	1(6)	7(4)	4(3)
8/21	.	.	.	.	.	1	3(2.0)	.	.	3	2(1.6)	6(12)	.	1	.	.	5(2.6)	3	1(6)	4(4.2)	2	5(5)	4(7)	3(2)
8/28	.	.	.	.	.	1	2(2.5)	1	3	.	3(3.0)	25(19)	3	1	2	.	1(3.5)	1	24(8)	1(3.9)	1	9(8)	26(5)	10(4)
9/4	.	.	.	.	.	1	4(3.5)	.	2	1	2(3.3)	13(21)	4	1	3	.	4(3.1)	4	54(10)	4(4.6)	3	7(6)	16(8)	6(4)
9/11	.	.	.	.	.	.	5(3.0)	.	.	2	(2.4)	45(20)	4	2	2	.	3(4.3)	2	90(10)	11(4.0)	2	19(6)	16(10)	3(4)
9/18	1	.	.	1	1	.	(3.0)	.	1	1	2(3.0)	31(23)	3	.	1	.	9(5.3)	6	65(9)	4(4.3)	1	20(7)	24(8)	9(5)
9/25	.	.	.	.	.	.	1(3.3)	.	1	3	3(3.5)	32(22)	3	.	2	3	4(4.9)	3	28(9)	7(4.2)	2	28(8)	13(5)	6(4)
10/2	.	.	.	1	.	1	(2.6)	2	3	2	(1.5)	18(21)	1	.	1	1	3(3.8)	5	16(7)	4(4.6)	.	10(10)	14(8)	6(4)
10/9	2	.	.	1	.	.	(2.2)	.	3	1	2(2.5)	7(20)	3	.	2	1	2(3.2)	3	9(9)	3(4.0)	1	5(8)	6(6)	8(5)
10/16	.	.	.	.	.	1	(2.5)	.	.	.	5(4.0)	9(18)	1	.	1	1	3(2.7)	2	1(8)	1(3.5)	1	3(8)	9(6)	3(4)
10/23	1	.	.	.	.	.	2(3.1)	.	.	1	1(2.5)	9(17)	1	.	2	1	4(2.5)	2	6(6)	(3.5)	2	3(8)	11(5)	7(3)
10/30	1	.	.	.	.	1	(2.0)	.	4	1	1(2.5)	8(17)	1	1	3	2	2(2.6)	1	6(7)	1(3.5)	2	5(8)	7(3)	1(2)

* The numbers in parentheses show the average normal incidence of typhoid fever for the ward, based on the experience of the previous five years.

With such a history one could not help but suspect the presence of a chronic bacillus-carrier, and accordingly specimens of stool were obtained from the entire household. Those of the dairyman developed almost a pure culture of typhoid bacilli on Conradi-Drigalski plates. Subsequent examinations made after a month and again after a year yielded similar results.

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Attention is called to the fact that the milk was shut out within a very short time after the outbreak began. It will be seen from the tabulation that the increase

began with the week ending August 28. The milk was shut out September 1. This is about as quick work as is possible under the most favorable circumstances. Nevertheless, the infections which had already taken place by that time were so numerous that the outbreak assumed really enormous proportions.

Another point to which we wish to call attention is the fact that milk may be infected by a chronic bacillus-carrier handling it, even though he be cleanly in his habits. This particular dairyman was a better-class dairy farmer who kept his home and his dairy much cleaner than the average dairyman. Moreover, he was personally clean. The occurrence of repeated infections in this case shows the danger of having bacillus-carriers on a dairy.

Dairyman X. died Sept. 22, 1911, of "heart disease", and it will be interesting now to study the further incidence of typhoid fever in the village. This will be made the subject of a subsequent paper.

The following shows the biologic characteristics of the bacilli isolated from the stools of Dairyman X. Four specimens of feces were examined from this case:

Oct. 23, 1909.....	showed almost pure culture of typhoid		
Nov. 3, 1909.....	"	30%	typhoid-like colonies
Dec. 27, 1910.....	"	no	" " "
Jan. 27, 1911.....	"	50%	" " "

A loopful of feces was diluted in about 6 c.c. of sterile broth, and a loopful of this dilution was streaked over a Conradi-Drigalski plate. The typhoid-like colonies which developed after twenty-four hours' incubation were fished into broth and after growth for twenty-four hours, 37 C., were tested for agglutination with an anti-typhoid horse-serum.

TABLE 2.—CULTURES OBTAINED FROM FECES OF DAIRYMAN X

	Control	1/1000	1/2000	1/5000	1/10000
Laboratory typhoid culture.....	—	++	++	+|	±
8.1.....	—	+	+	+	±
8.2.....	—	+	+	+	±
8.3.....	—	+	+	+	†
8.4.....	—	+	+	±	Non mobile

The cultural characteristics of the X. cultures in neutral-red-lactose-peptone-water fermentation tubes, in glucose fermentation tubes, in litmus milk, in gelatin and in Dunham's peptone solution (indol test being negative) were like those of the laboratory typhoid culture used as a control.

An absorption test of the agglutinins in the anti-typhoid horse-serum was made using one of the X. cultures.

TABLE 3.—ABSORPTION OF AGGLUTININS IN TYPHOID SERUM BY X CULTURE

	Control	1/10	1/20	1/40	1/80	1/160	1/320	1/640
Laboratory typhoid cultures	—	+|	+|	+|	†	±	±	—
X culture.....	—	++	+|	+	†	—	—	—

A Nation's Health.—The health of a nation is its most valuable asset, and the maintenance of health is of much more importance than the treatment of disease. The struggle for existence is not merely an individual question, but it is becoming more and more a national question, and the nation which produces the finest race is sure to win in the long run. As Prof. Arthur Thomson says, "What children usually die of is their parents, and what a nation dies of is lack of men." —Sir James Barr, in *Canada Lancet*.

VACCINE INOCULATION, PROPHYLACTIC AND CURATIVE, OF TYPHOID FEVER *

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To those not wholly familiar with the subject it will come as a surprise to know that the theory of immunization by bacterial vaccination is nearly as old as the science of bacteriology itself, dating from Pasteur's experiments with the anthrax bacillus in the early eighties of the last century.

It is now twenty-five years since Frankel and Simonds immunized rabbits against typhoid, and fifteen years since Pfeiffer and Kolle and Wright almost simultaneously gave the first typhoid inoculations to man. Partly on account of faulty methods of preparation of the vaccine, and partly on account of false premises and prejudice, typhoid inoculation made little headway and, for a time after the South African war, was somewhat discredited.

With the past five years, however, the practice has been put on a sound footing, first as a prophylactic measure and more recently in treatment, and it is proving its worth in both fields.

There are so many features of the subject that few can be considered, and these but briefly.

First to be spoken of is the preparation of the vaccine. Of the many types, I will speak only of that in use in the United States Army, which is prepared by Major Frederick F. Russell in the laboratory of the Surgeon General's office in Washington. The organism used is from an old culture which has ceased to be pathogenic, and which produces an abundant growth on agar. It is inoculated on agar in specially constructed flasks giving a known surface of media. After eighteen hours' incubation the agar cultures are washed off with the normal salt solution, put into flasks, and the culture killed by subjecting it to 55-56 C. over a water bath for one hour. While sterilization is taking place, a count is made of the bacterial suspension for the purpose of standardizing, after which it is diluted with normal salt solution, so that 1 c.c. shall contain 1 billion bacilli, and 0.25 per cent. tricresol is added. It is tested by bacteriologic methods for both aerobic and anaerobic bacteria, and as a further measure of safety inoculations are made into guinea-pigs. It is then put up in sealed ampules containing 1 to 25 c.c.

The immunizing dose of the vaccine is given in three injections at intervals of ten days. The first injection is of 0.5 c.c., while the second and third are of 1 c.c. each. The injection is given with an ordinary hypodermic syringe into the deltoid muscle near its insertion. The site of the inoculation may be previously sterilized by any of the ordinary means, but in the military service where large numbers are treated at a time, it is customary to paint the skin with tincture of iodin before the inoculation and touch the needle wound with the same solution afterward.

The reaction following the inoculation is usually not severe. Locally there is an area of hyperemia around the wound made by the needle, and more deeply there is a sharply circumscribed area of induration, which is somewhat tender. Movements of the arm calling the deltoid into play are painful and there is some stiffness.

* Read at a joint meeting of the Philadelphia Pediatric Society and New England Pediatric Society with the Section on Pediatrics, New York Academy of Medicine, Nov. 9, 1911.

Exceptionally there is some swelling and tenderness of the axillary glands, but no case of suppuration has ever been reported. Sloughing around the site of injection never occurs. An urticarial rash is one of the less common results. It usually involves the chest and abdomen of the patient and may persist for a week or more. Herpes facialis has been reported a few times. Some constitutional disturbance is usual, though frequently entirely absent. This consists only of feverish sensations and malaise in the lighter cases. The more severe reactions, classed as moderate, show a fever up to or above 101 F., chills, slight nausea, profuse perspiration and some nervous disturbances. Hysterical attacks have been reported, and I have seen several cases in which there were attacks of dyspnea, which were apparently of hysterical origin. The onset of the reaction is usually within six hours, it is at its height in twelve hours and has subsided in twenty-four hours, leaving only a little stiffness of the arm. Reaction is much more constant and more severe after the first injection than after the subsequent ones, though the reaction after the second is often the more severe on account of the increased number of bacilli. Children, though complaining rather uniformly of the local pain, have usually little general reaction.

At the Columbus Barracks recruit depot, where I have been recently stationed, each recruit is vaccinated against small-pox and given the first typhoid inoculation on the day of enlistment. At the time of the second inoculation, ten days later, many of the men are suffering with vaccinia, so that in these men reaction from the second inoculation is frequently moderately severe, but even in these cases the ill effects are quite transient. With this rather unavoidable exception the inoculations are not given to men suffering from any illness. This precaution is an important one, for the vaccine has proved that it is not without ill effects on the sick, and the aged and debilitated should also be excluded from its use. The report of the Surgeon-General of the United States Army for 1911 cites the case of a man who, after being given the first inoculation, gave a severe reaction followed by symptoms of acute pulmonary tuberculosis. It was evident that a latent infection had been stirred up to activity by the effects of the injection. Severe reaction coming on quickly after the injection, with fever of 103 F. or more together with gastro-intestinal symptoms occur very rarely. Russell places the percentage of these reactions at 0.1 per cent. and attributes them to the introduction of the vaccine into a large vein.

It will be seen that the discomfort and pain from the typhoid inoculation is comparable only with that of the lighter cases of vaccinia following small-pox vaccination. If it can be shown that it offers a comparable degree of immunity to a much more imminent danger, why should not its use become equally general?

The typhoid immunization, at first a voluntary measure in our army, has since July 1, 1911, been made compulsory for all officers and enlisted men below the age of 45 years who have not had an authenticated case of typhoid fever.

The immunization of the army has proceeded rapidly until, at the present time, somewhat over 60,000 men have completed the necessary three inoculations. It is to the records of our army, together with those of Great Britain and Germany, that we must look for evidence of the practical value of the procedure. It was first introduced as a practical measure on a large scale by Sir Almroth Wright, who inoculated about 100,000 men during the South African war. No reliable records were kept and such as were available seemed to discredit somewhat the value of the procedure, and its use in the English army was abandoned. Wright, however, collected data concerning about 20,000 of the men who had been inoculated and from this he was convinced that the vaccination had resulted in a diminution in the typhoid rate. Though the public confidence in the vaccination was badly shaken, Wright with the aid of a commission headed by Sir William Leishman succeeded in rehabilitating the practice and in getting its use restored in the British army in 1904. The latest figures available from this service are those of Col. R. H. Firth, R. A. M. C., covering the colonial army in India during the years 1906 to 1910 inclusive. He gives the rates of typhoid and of deaths therefrom, and of men inoculated per thousand for these years, as follows. In 1906, the typhoid rate was 15.6 and the death-rate 3.19 among a military population, 66 per thousand of whom had been inoculated. In 1907, the typhoid rate was 13.1 and the death-rate 2.77, the inoculated population being 143 per thousand. In 1908, the typhoid rate was 14.5, death-rate 2.76, inoculated population 225 per thousand. In 1909, the typhoid rate was 8.9, death-rate 1.58, inoculated population 613 per thousand, while in 1910 the typhoid rate had fallen to 4.6, the death-rate to 0.63, while the protected population had been raised to 823 per thousand. Here the use of the inoculation must be given the credit for a reduction in five years of the typhoid rates from about 15 to less than 5 per thousand, the death-rate from over 3 per thousand to 0.63 per thousand. Taking the year 1910, there occurred in a strength of about 70,000 men, 306 cases of typhoid, 155 in about 60,000 inoculated and 151 in about 10,000 who were unprotected. This gives a rate approximately six times as great for the uninoculated. Of those who contracted typhoid, 11.2 per cent. of those inoculated died, while the death-rate for those not inoculated was 16.1 per cent.

Very reliable data is available for the use of typhoid immunization in the German army in Southwest Africa during the Hereros campaign from 1904 to 1907. Though the results achieved were not as brilliant as those just quoted for the British army in India and for our own army to be spoken of later, they were, nevertheless, convincing of the value of the procedure, and any lack of success must be charged up to the earlier methods of preparing the vaccine. Of 16,496 men who participated in the campaign, 7,287 took the inoculation, which was voluntary. Among these men there occurred 1,277 cases of typhoid, the rates being 5.09 per cent. for those inoculated, and 9.84 per cent. for those uninoculated. Still more striking is the evidence shown by the differences in the death-rates, cases among the inoculated giving a death-rate of 6.47 per cent., while for those uninoculated the death-rate was 12.8 per cent. When it is considered that these figures are for nearly 1,300 cases of typhoid all with the same surroundings, the value of the prophylactic inoculation in reducing the severity of the disease is apparently beyond question.

Nowhere, however, do we get such convincing evidence for the practice of typhoid immunization as from the records of our own army. Up to the present time over 60,000 men have completed the inoculation, and among this entire number, and covering a period of nearly three years, but twelve cases of typhoid have developed and no death has occurred. One man at the Guantanamo Naval Station died five days after the first inoculation from a case of walking typhoid. This is the only fatal case of typhoid in the government service in any one on

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whom the inoculation had been begun. The record of the Maneuver Division in camp at San Antonio, Texas, during the past summer has been most instructive. An army division having an average strength of 12,800 men, all inoculated, occupied the same camp for four months, from March to July, and in this command but one case of typhoid developed. This was a mild case in a hospital corps man who had not completed the inoculations necessary for protection. Lieut.-Col. J. R. Kean, who has recently reported on this camp, is authority for the report of forty-nine cases of typhoid with nineteen deaths for the city of San Antonio for the same four months. During the same period that this camp existed at San Antonio, between three and four thousand men were in camp at Galveston, Texas, and in this command no case of typhoid occurred, while the city of Galveston furnished 192 cases of the disease during the existence of the camp. The city and the camp had the same water-, milk- and food-supply, the only difference being that the camp had been protected by inoculation.

About 3,000 men were scattered along the Mexican border mostly in small camps, many of them in localities where typhoid was present, yet of this command only one man contracted typhoid, which ended in recovery. Contrast the record of these camps with those of the concentration camps of the Spanish-American war and consider the intimate contact of these camps with typhoid-infected cities. It is inconceivable that, with such conditions, the practical abolition of typhoid could have been effected without the use of the immunizing inoculations. There are a few thoughts that suggest themselves here.

First as to the paratyphoids. Clinically these are not to be distinguished from the milder cases of true typhoid. Yet neither the degree nor the constancy of the group reactions among the bacilli concerned would warrant us in believing that typhoid inoculations would be protective against the paratyphoid bacilli. Therefore, before we can obtain absolute data concerning the protection afforded by inoculation, it will be necessary to obtain the proportion of paratyphoid fever to true typhoid in the community, or by bacteriologic examination to trace the organism concerned in every case of supposed typhoid among the inoculated. In the tropics it is likely that a fair proportion of the continued fevers are paratyphoids, and in such localities inoculation may prove comparatively disappointing. In any community where the proportion of paratyphoid infections is found to be high the use of a mixed typhoid and paratyphoid vaccine might well be indicated.

The duration of immunity conferred by the inoculations is an important matter not yet settled. Firth, after a statistical study of the question on the British Colonial Army in India, places the period of protection after the first immunization at thirty months. Leishman thinks the reinoculation should be given after two years. In the United States Army the enlistment period is three years and for the present the orders are that the inoculation shall be given at each enlistment. This is a point that only experience will clear up; and also as to whether, as in small-pox, the second inoculation will confer practically permanent immunity.

The treatment of typhoid by inoculations is still in the experimental stage. To show how unsettled this practice is, it need only be observed that the dosage given and recommended by different writers varies between 1 million and 1,000 million bacilli. No reports of large numbers of patients treated by individuals are yet available, but those to the number of thirty or forty have been reported by a few. The total number of cases in the literature will probably not exceed 400, but most of these have been closely observed by most competent men. The sum of the opinions of these men is unquestionably favorable.

Inoculation shortens the fever period and the total duration of the disease; it reduces complications and relapses markedly; the mortality of all cases that I have been able to find reported is 4.9 per cent. A distinct crisis following the second inoculation is reported by Meakins and Foster of Montreal, to take place in 50 per cent. of their cases. It is interesting that these men gave the largest dosage of the vaccine—from 1 billion to 2 billion bacilli. Very pronounced amelioration of headache, gastro-intestinal symptoms and toxemia is usual. It has apparently been directly life-saving in a few, all but hopeless, cases, though ordinarily it has little effect on such. All agree, however, that even in the cases in which it causes no improvement, it has done no harm. The negative phase of Wright, which did so much to retard progress in typhoid immunization, is non-existent except in the most excessive dosage of the vaccine. In few cases reported was there any increase of temperature following the treatment, and in none was there any aggravation of the disease. The dosage employed in the earlier cases usually ran from 10 to 100 million. With increasing confidence the dosage has been increasing, until at the present time it is usually from 100 to 500 million. It is probable that those who have reported negative or discouraging results have been using the vaccine in too small dosage and that, with increasing dosage, even better results than thus far reported will be obtained.

The conclusions to be drawn from all this evidence are of a definite character. The case for typhoid immunization, both in prevention of the disease and in decreasing case mortality, is a strong one. It is with reason that the Surgeon-General of the Army has given it as his opinion that the protection afforded by vaccination against typhoid would compare favorably with that against small-pox.

In treatment the vaccine has yet to definitely prove the extent of its worth, though in it we see the ray of hope of an agent which will reduce typhoid mortality below its heretofore irreducible minimum.

THE OCCURRENCE OF A POSITIVE WASSERMANN REACTION IN TWO CASES OF NON-SPECIFIC TUMOR OF THE CENTRAL NERVOUS SYSTEM

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So much experience has accumulated and has been published in attestation of the high diagnostic value of the Wassermann reaction that observations which seem in any measure to diminish that value should be dealt with circumspectly. It appears to have come to this: that, providing the performance of the test be not impugned, a positive Wassermann reaction is almost universally considered as imposing the obligation to find evidence of syphilis in the tissues or in the history, or, failing in this, nevertheless confidently to assume it. But cases will occur in which one cannot get rid of a sense of perplexity. Such are the two cases I am about to record. The first is sufficiently odd, apart from the discrepancy between what the Wassermann reaction indicated and what the autopsy disclosed. In both the

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interpretation will choose between an error somewhere in the complicated process of the test and the existence of occult syphilis; for to dispute the specific nature of the Wassermann reaction would at present seem rash. It is proper to state that the examinations of the blood-serum and the cerebrospinal fluid were made by men whose experience with the method now extends to thousands of cases, and that the histologic character of the tumors was determined by Professor Ophüls, of Stanford University.

Case 1.—*Epitome.*—Word-deafness and paraphasia of rapid onset. Wassermann positive. Temporary improvement under specific treatment. Tumor of left breast. Increase of cerebral symptoms. At autopsy carcinoma of the breast, gliosarcoma of the brain. Wassermann in the cerebrospinal fluid positive.

History.—When on April 13, 1911, I was requested to call on the patient, a widow aged 53, I was told that she had been complaining of pain in the left side of the head for about ten days, and also of dizziness, but it was only on the evening before that she first appeared confused, misnamed objects or could not name them at all, and to familiar questions returned irrelevant answers. On this information a sensory aphasia and paraphasia had been anticipated. It was therefore with some surprise that Dr. M. B. Lennon and I, when introduced to the patient, heard the voluble protestations of good health with which she greeted us, and perceived her comprehension of the remarks addressed to her. But we were still more startled when the patient's intelligible speech suddenly changed to jargon and her ability to comprehend what we said to her at the same time ceased. In about ten minutes coherent speech and power of comprehension returned, to be lost again later in the same abrupt manner. We observed this alternation of disorder and recovery of speech several times in the course of something more than an hour that we spent with her. However, even when her spontaneous speech was intelligible and her power of understanding normal or approximately so, she evidently had difficulty in naming objects; a watch, especially, was beyond her power to name. She could read and also write to dictation.

Examination.—Oppenheim's case[1] of a tumor in the supramarginal gyrus, in which the aphasia was strikingly affected by the patient's sitting up and lying down, immediately occurred to me, but we could not establish in our case any relation between the disturbance of speech and the patient's position. There was a slight tenderness of the skull to pressure above the left ear. Papillitis could not be discerned. Neurologic examination revealed nothing further at this visit. Blood was withdrawn for the Wassermann reaction the same evening and on the following day Dr. L. S. Schmitt reported that it was positive. There was no means of confirming this result from the history. The patient's husband died about twenty years ago of Bright's disease. Her children are healthy.

Course.—Treatment with iodid of potash and with mercurial injections was commenced by Dr. Lennon without delay. On the following morning he found the patient able to speak correctly and to understand what was said to her, and also to name objects, including the watch, which she had not been able to do the evening before. The attacks of dizziness and the headache subsided, and for several weeks her progress was considered satisfactory by the physician and the family.

On May 27 Dr. Lennon reported that after a period of vomiting the same difficulty of speech as in the beginning had recurred. The patient again became dizzy and complained now of pain in the left side of the face. On this day she showed Dr. Lennon for the first time a hard, nodular mass in the left breast. I visited her for the second time June 8 and found her restless and loquacious as at the first visit, and now persistently word-deaf and paraphasic. She could read fluently certain words submitted to her. The temporal bone over the external auditory meatus had grown more sensitive. Dr. W. F. B. Wakefield having agreed with us that the tumor in the breast was in all likelihood a carcinoma, it now seemed probable that the disease in the brain was also carcinomatous. We did, however, hesitate in our conclusion on account of the absence of palpable metastases, and the positive Wassermann, furthermore, made us pause. The rapid, even sudden, onset of the aphasia as related by the family of the patient denoted rather syphilis or a metastatic growth than a primary tumor of the brain. Yet had not the tumor in the breast been there, we should have attempted to remove the cerebral tumor; its localization was certain and it seemed easy of access. A right hemiplegia gradually developed, the disks became choked, the patient failed rapidly and died July 11.

Pathologic Examination.—Dr. Lennon removed the brain and excised the tumor from the breast. It is much to be regretted that a complete necropsy was not performed. Cerebrospinal fluid from the cranial cavity was examined by Dr. Schmitt. This also gave a positive Wassermann and a strong reaction with Noguchi's butyric acid and with Nonne's method. Microscopic examination showed that the tumor of the breast was a carcinoma and that the tumor of the brain was a gliosarcoma. The latter was attached to the dura, was spherical, about 1¾ inches in diameter, and occupied on the surface of the brain the full width of the left second temporal convolution, invaded the third and was bounded above by the superior temporal sulcus. On a frontal section of the brain passing just in front of the pons the growth could be seen to have penetrated into the first temporal convolution; this section also showed the effects of the pressure exerted by the tumor on the internal capsule, which accounts for the hemiplegia. There was no trace of syphilis in the brain.

Does the triad of carcinoma, sarcoma and positive Wassermann signify anything more than a fortuitous concourse of two kinds of malignant growth and syphilis? Or is there a causative relation between the tumors[2] or between the one or the other of the tumors and the Wassermann reaction?

The concomitance of a positive Wassermann reaction with a fibroma situated in the cerebello-pontile angle has been reported by Oppenheim[3] in one case and by Marburg[4] in another. Toby Cohn[5] also observed a patient with a cerebral tumor, whose blood-serum was tested by the Wassermann method three times, each time with a positive result. In none of these cases was there a history of syphilis, but in all of them there was a more or less marked temporary improvement under antisyphilitic treatment. Forster[6] mentioned, in a discussion of these cases, that he had seen a patient with the symptoms of a spinal tumor and a positive Wassermann reaction, from whom an endothelioma was removed, but as subsequently a hemianopsia supervened there may have been syphilis after all. Nonne[7] has objected that in these cases the positive reaction could not prove more than that the patients had at some time been infected with syphilis: to prove the syphilitic nature of the disease in the central nervous system the Wassermann test should have been applied to the cerebrospinal fluid.

But that even this extension of the Wassermann test may give a result not in accord with the ascertainable facts I soon had an opportunity to learn. For on the day following the death of the first patient, while I was, so to speak, conning the lesson her case seemed to teach, the second case presented itself.

Case 2.—*Epitome.*—Gradual development of symptoms of compression of the spinal cord. In October, 1910, Wassermann reaction in the blood-serum positive. In July, 1911, reaction in the cerebrospinal fluid positive. Aug. 31, 1911, removal of

1. Oppenheim's Lehrbuch der Nervenkrankheiten, ed. 5, p. 1025, and Deutsch. med. Wchnschr., 1898, xxiv, 155.

2. Schmorl (Verhandl. d. deutsch. path. Gesellsch., 1908, p. 101) relates the simultaneous occurrence of a melanosarcoma and a carcinoma of the stomach in one case and of carcinoma of the uterus and lymphosarcoma of the left ovary in another.
3. Oppenheim: Neurol. Centralbl., 1910, p. 338.
4. Marburg: Neurol. Centralbl., 1910, p. 570.
5. Cohn: Neurol. Centralbl., 1910, p. 688.
6. Forster: Neurol. Centralbl., 1910, p. 697.
7. Nonne: Neurol. Centralbl., 1910, p. 1178.

an intradural psammoma; reaction in cerebrospinal fluid procured during operation negative. Sept. 18, 1911, reaction in blood-serum negative.

History.—Particulars of this case will be confined at present to the matter under immediate consideration; further details may be published later. The patient was a woman aged 45. Her husband stated that he had a "chancre-wart" thirteen years before he married her; he cauterized it himself with a stick of caustic and observed no consequences of it. The first pregnancy terminated early with a miscarriage; the second went to term and its issue was a daughter, now 20 years old and apparently well. Further pregnancies were voluntarily aborted.

Diagnosis and Treatment.—In September, 1910, Dr. H. C. Moffitt expressed the opinion that a tumor was causing the compression of the cord. It was at his instance that the Wassermann reaction of 1910 was made; it was positive. Knowing the result of that examination of the blood-serum and bearing in mind Nonne's objection in July, 1911, I withdrew fluid by lumbar puncture and immediately conveyed it to Dr. H. R. Oliver, who reported that the reaction was positive. One may say that it seemed obstinately positive, for, since the previous October, the patient had undergone prolonged inunctions of mercury, injections of a (presumably insoluble) mercurial preparation, a subcutaneous injection of 0.6 salvarsan, followed by an intravenous injection of 0.3 salvarsan, besides treatment with some iodid. All this had not inhibited the progress of the compression. Still deferring to the verdict of the Wassermann test, however, specific treatment was resumed and continued for another month.

Operation.—Finally I requested Dr. Harry M. Sherman to perform a laminectomy. In the course of the operation, after the patient had been under the influence of the anesthetic for about an hour, cerebrospinal fluid was obtained through a pipette before the dural sac was slit open. This fluid was submitted to Dr. L. S. Schmitt, who reported that both the Wassermann and the Noguchi methods gave a negative reaction. The tumor was successfully removed, and the patient has regained much of the power that had been lost. On September 18 a quantity of blood was taken from a vein and divided into four parts. Dr. Whitney, who, I understand, had made the examination in October, 1910, Dr. Schmitt, Dr. Oliver and Dr. E. A. Victors each examined one of these parts and all reported that the reaction was negative.

Two such experiences will justify a disinclination to regard a positive Wassermann reaction in similar cases as absolutely decisive, and I must confess that they have made me doubtful of another case, in which there has been no opportunity yet for verification. My first case and three of those quoted in the foregoing illustrate the possible fallaciousness of a diagnosis *ex juvantibus*, so that it is extremely urgent that whatever uncertainties attach to the practice of the Wassermann method should be eliminated.

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The Blood-Cell as an Agent in Immunity.—Gengou, after a most exhaustive series of experiments conducted in the Pasteur Institute, reaches this conclusion: The phagocytes, under the stimulus of the bacillus and its products, exhibit a positive chemiotaxis of a marked character. They approach the bacilli, ingest them by a physiologic act, and destroy by means of a substance which is not found in either the plasma or the blood-serum, but which can be demonstrated in an extract of the microphages. Similar experiments have been conducted on rats, by Sawtchenko, who found that the resistance offered by the rat to the anthrax was due to phagocytic activity. Did time and space permit, a mass of further evidence might be adduced to show that the natural immunity, the active, protective agent is the blood-cell which in a healthy organism is amply able to attack and destroy the intruding enemy.—Sweeney in *New York Medical Journal.*

THE TREATMENT OF INTESTINAL AMEBIASIS*

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As is the case in so many other infections, especially those manifesting themselves as more or less chronic processes, the natural tendency in amebic infections of the colon is toward recovery.

In routine post-mortem examinations in Manila, all stages of healing and even healed amebic ulcers are very frequently encountered where amebic disease had not been suspected during life, and where no dysenteric therapeutics had been employed. Furthermore, we have a large number of records of cases of undoubted amebic ulceration of the colon, characterized by an unmistakable clinical picture with amebas in the stools and in some cases the diagnosis confirmed by sigmoidoscopic examination, in which apparent recovery took place without any special or sufficient treatment and in which post-mortem examination from one to five years later failed to show any ulceration, visible scarring or other abnormality of the colon.

We conclude from these facts not only that there is a natural tendency to recovery from the disease, but also that such recovery actually takes place in a considerable percentage of patients and that recovery in many instances may be so complete as to leave little or no permanent scarring of the intestinal wall.

Another factor which may increase the difficulty of accurately determining the results of treatment goes back to the pathology of the infection. Formerly, our conception of the pathology of the amebic lesion consisted mainly in a definite and typical type of ulceration. Later studies have shown that the types of ulcers vary considerably and several decidedly different lesions have been described. Wooley and Musgrave and Rogers have described and illustrated erosions too insignificant to be called ulcers, and the former authors have also noted epithelial cell-death around nests of amebas situated in the follicles of the intestinal mucosa, without loss of continuity of tissue—the pre-ulcerative lesion. At the time of the publication of these results, all these lesser processes were considered but early manifestations of the more extensive and typical destruction of tissue.

For a number of years, my opinion has been growing stronger that all expressions of amebic harm are not to be found in ulceration of the mucosa, and that there is a definite amebic pathology in which there is no break in the continuity of the mucous membrane of the bowel.

This proposition is not susceptible of proof at the present time, but there are many data which may be used in support of such a hypothesis, and if we accept the etiologic rôle of amebas at all, I do not see any other explanation of some of the clinical types and pathologic conditions so commonly encountered in zones where amebic infections are frequent.

There does not appear, *a priori*, any more reason to assume that ulceration of the colon is a *necessary* and constant lesion of amebic infection than that ulceration of the follicles of the ileum is necessarily a result of typhoid fever. In many cases of amebic ulceration of the colon, a catarrhal condition of parts of the intact mucosa may be found, in which sections show a suggestive relationship between the areas of degenerating epithelial cells and the location of colonies of amebas. The accept-

* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

ance of amebic etiology of this condition is hypothetic, but personally I believe that future and more accurate studies of the pathology of this infection will recognize an amebic colitis without ulceration of the mucous membrane.

THE IPECAC TREATMENT

One may obtain from the literature of the subject pretty good authority for the most divergent views as to the value of ipecac in dysentery. It is not my intention to review this mass of literature, which consists largely of conclusions arrived at as a result of that very difficult and often fallacious test, "clinical results."

If we assume, as we must, the honesty and accuracy of the observations of many experienced workers who have reached diametrically opposite conclusions from their experiences with this drug, it is reasonable to conclude that there are unknown or overlooked factors which have influenced their conclusions.

The three most important of these factors are:

1. The incomplete knowledge of the pharmacology of ipecac.
2. The different conceptions of "dysentery."
3. The various definitions as to what constitutes a cure in "dysentery."

Very little is known of the physiologic action and other pharmacologic properties of ipecac, and because of this deficient knowledge it is impossible for manufacturing chemists to standardize their products, with the result that there may be a considerable variation in the efficiency of the drug as it is found on the market. Many authorities consider this probable variation in the different preparations of the drug as responsible, at least in part, for the divergent therapeutic results obtained from its administration in dysentery. Such a position seems well taken, for there is every reason to believe that the unknown active principle of this drug may vary in strength as much as that of any of the other well-known medicinal plants; and until pharmacologic standardization of ipecac becomes possible, probable variation in the strength of the drug must be taken into consideration in drawing conclusions as to its therapeutic value.

The drug very probably exerts some very decided action on the intestine, as is proved by the results of its administration to healthy persons:

Ten healthy persons with no symptoms of gastro-intestinal disturbance were given 3-gram doses of powdered ipecac in salol-coated pills in a manner similar to that employed in the "ipecac treatment" of dysentery.

Seven of these persons developed diarrhea, which in four was severe with frequent stools and the condition lasted from two to four days; in three there was considerable abdominal pain and slight tenesmus. Special preparation to prevent nausea and vomiting usually are not necessary with Filipino patients because, in the majority of instances, the administration of the drug in ordinary gelatin capsules is not followed by either nausea or vomiting.

Without doubt the most important factor influencing the various opinions regarding the value of ipecac in dysentery is the wide difference in the definition of "dysentery" among medical men. This statement is true to such an extent that if we carefully examine the literature with this point in view, it is possible to see a good deal of harmony in the results of actual experiments. In general, it may be stated that the majority of pro-ipecac literature deals with results obtained in acute and chronic "clinical dysentery" characterized by frequent stools with blood and mucus and usually accompanied by tenesmus, whereas most of the writers who have made less satisfactory reports as to the value of the drug in amebiasis have considered the disease more from etiologic and pathologic standpoints and have thereby included many of these numerous cases of ulceration of the colon without "clinical dysentery" symptoms—cases which are rarely classed as dysentery—amebic or otherwise—in the reports most favorable to the ipecac treatment of the disease.

With a few notable exceptions, articles discussing the ipecac treatment of dysentery follow the above idea so closely that one may anticipate the author's conclusions by reading abstracts of his clinical case records. Such an analysis of the literature permits one general conclusion—which so far as I know never has been seriously disputed—that ipecac is a valuable drug in "clinical dysentery" of whatever etiology.

After a personal experience with the ipecac treatment in several hundred cases, it has seemed to me possible to estimate its value only in terms of "clinical symptoms," which we now know do not necessarily express the actual conditions existing in the colon in amebiasis.

In "clinical dysentery," as defined above, of whatever etiology, ipecac given in large doses, as usually recommended, is a valuable drug. In the majority of instances its administration is followed by a rapid subsidence of the symptoms and quick convalescence. In a smaller percentage of such cases it apparently does no good whatever, and in a not insignificant number its administration is followed by an aggravation of the symptoms which in some grave cases may at least hasten an unfavorable termination, particularly if, as may happen even with the greatest care, severe nausea and vomiting results from the treatment.

However, it must be remembered that it is in the class of "clinical dysenteries" that the best results are obtained with other forms of treatment beside that of ipecac. The natural course of an acute attack of dysentery is usually short and terminates in death or recovery. In a small percentage of cases "chronic dysentery" follows an initial acute dysentery, but in the majority of instances the chronic disease, particularly of amebic etiology, develops gradually and no such acute onset occurs.

Acute outbreaks, due either to an exacerbation or to intercurrent infection, are frequent in chronic dysenteries, particularly in amebic cases, and, if the patient can withstand the effects of the acute inflammation, a beneficial influence on the chronic process usually results. This is true particularly in intestinal amebiasis as is indicated by the following brief report of fourteen such cases.

In fourteen private patients suffering from intestinal amebiasis a cure with permanent disappearance of amebas from the stools has followed recovery from an intercurrent acute dysentery which in the four cases, in which the cause was studied, was due to the *Bacillus dysenteriæ*.

My attention was first directed to this point some years ago in the following case:

Mrs. C., an American, four years in the Philippine Islands, developed a typical attack of amebiasis with moderately severe clinical symptoms and with amebas in the stools. The diarrhea was intermittent and occasionally small amounts of blood were found in the stools. She was placed under treatment and the clinical symptoms subsided in about five days, but amebas were still present and continued so in many examinations during the next year. During this time there were several recurrences of clinical symptoms of the infec-

tion, and the patient lost about 10 kilos in weight. She refused to take treatment except during the time when she had diarrhea. More than one year from the time of the diagnosis of the amebic infection, the patient suddenly developed a typical attack of clinical severe acute dysentery. Amebas were present in the stools, and *B. dysenteriæ* were isolated by culture. The attack was a particularly severe one with the several symptoms of this condition, such as fever, frequent bloody mucous stools, tenesmus and prostration. During three days the patient was delirious, and stools were voided involuntarily. On the fifth day of the acute disease, there were a few motile amebas present and many cells of doubtful diagnosis. On the fifteenth day no amebas were found in the stools and none have been found since in many examinations. Convalescence from the acute dysentery was satisfactory; there has been no subsequent bowel trouble, the patient has regained her former weight, and is apparently perfectly well.

The other thirteen cases mentioned were somewhat similar to this, differing principally in the duration and severity of both the acute dysentery and the amebiasis and in the time of the disappearance of the amebas.

In two of the patients, amebas were found for one month after the acute attack and in one case for three months, but they finally disappeared without any special treatment of the disease.

I do not know how general such a condition as described in these cases of double infection may be, but the curative influence of the acute disease on the more chronic one of the amebic infection seems a decidedly positive one. This conclusion also is borne out by autopsy studies. I have several records and specimens of cases of old chronic amebic infection in which death occurred as the result of an intercurrent acute bacterial dysentery. At autopsy in these cases the pathologic picture is that of an acute inflammatory condition engrafted on the older amebic ulceration. The edges and bases and tissues surrounding the usual typical amebic lesions show decided changes. The dull, necrotic, undermined, chronic process has been changed to an acute one with congestion and hyperemia. The contents of the ulcers have changed from the indefinite, granular, foul-smelling material and mucus usually seen to the serous, mucoid material seen covering the surfaces in acute ulceration. Sections examined microscopically show a change from the necrotic, progressively destructive process of granular material containing amebas and with a small amount of cellular infiltration and tissue reconstruction surrounded by a practically non-inflammatory zone, to a typical acute process with hyperemia, edema, hemorrhages, and leukocytic infiltration.

GENERAL MEASURES

The general management of cases of amebiasis is determined largely by the clinical conditions of the patient. "Clinical dysentery" with bloody mucous stools, tenesmus and the other usual symptoms, of whatever etiology, demands during such period absolute rest in bed, a very restricted milk-free diet and measures for the control of intestinal peristalsis and for the relief of pain. When the acute symptoms have subsided and in all other cases in which the symptoms are less severe a much more liberal policy is indicated. Cases characterized by diarrhea, constant or intermittent, with more or less emaciation and general debility with or without an occasional acute exacerbation with more severe symptoms form the large majority of those seen in Manila and constitute what may be called average cases, very chronic in character and usually lasting for years unless properly handled. In former publications I have recommended a liberal diet and some form of occupation requiring both physical and mental activity of a moderate degree in this class of patients, and such a recommendation is reiterated at this time. Such treatment being contraindicated only durin, acute outbreaks and in the presence of symptoms indicating interference with the digestion and assimilation of food. *Proper support of nutrition* is considered the first requisite in the treatment of this usually chronic affection, and there is no satisfactory evidence that a sufficient amount of properly prepared digestible food aggravates the disease or interferes in any way with the success of the treatment unless the "ipecac treatment" is being used, when a temporary restriction of the diet is essential.

Only such medication is indicated as that which perhaps may have a tendency to improve the patient's general condition, and in certain instances to meet special conditions, as excessive fermentation, hyperchlorhydria and other manifestations requiring special consideration.

LOCAL TREATMENT

Local treatment by bowel irrigation, either alone or combined with some other form of medication, gives the most satisfactory results in the majority of cases of amebiasis. To secure the maximum of efficiency this form of therapeutics requires special attention to certain details, particularly to

A. The manner and time of giving the enema.

B. The solution to be used.

In former publications I have recommended the use of the long rectal tube to be employed with the patient in the left lateral (Sims) position. The experimental work of a number of investigators has proved the futility of trying to pass a long rectal tube through the sigmoid colon, and the same line of experiments, of showing the course of rectal tubes and fluids introduced by them by radiographic work with bismuth emulsions, has shown conclusively that no such special effort is required in order to get enemas to reach all parts of the large bowel from rectum to cecum. Indeed, it has been shown that the entire large bowel is easy of access by any form of enema provided sufficient quantity of fluid is used. In view of these results, the long 1- and 2-meter rectal tubes, formerly recommended and generally used in Manila, have been practically abandoned for the ordinary large-sized male rubber catheter which may be attached to an ordinary 2- or 3-liter irrigator, preferably made of glass.

In order to secure the best results from any form of rectal medication, the bowel must be distended by the substances employed. This object may be accomplished by using large amounts of fluid, and the result is materially influenced by the position of the patient and to a less extent by the condition of the lumen of the bowel at the time of the treatment.

The bowel capacity varies greatly in different individuals, owing to variations in actual size of the organ and particularly to its resistance to the introduction of foreign substances. Ordinarily, with proper care, from 2 to 3 liters of fluid may be used, but in many instances, particularly in women, as much as 4 liters may be introduced without any special discomfort to the patient. In those cases in which less than 2 liters of fluid can be taken, the condition may be assumed to be due to contractions of the bowel-wall, and if the best results are to be obtained from the treatment special preparatory treatment looking to an amelioration of the influence must be employed. Such treatment consists in a preliminary

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washing of the bowel, the use of sedatives, as opium in some form or, what is simpler and frequently sufficient where there are no special contra-indications, the administration of 25 to 30 c.c. of brandy by mouth, ten or fifteen minutes before giving the enema. Alcohol is much less objectionable for this purpose than is opium, because of the repetition which may be necessary with each treatment until a tolerance for the enema is established as is sure to occur under favorable conditions. Since the appearance of Meltzer's and Shaklee's work on the physiologic action of magnesium sulphate on peristalsis, this substance has been employed for the above purpose in 15- and 20-gm. doses given four to six hours before the enema, with very encouraging results. The knee-chest position undoubtedly is the best one for any form of medicated enema. The physiologic reasons for this statement are obvious, and experience has shown that in the great majority of cases a larger quantity of fluid may be taken in this manner than in the Sims position and that it is retained with greater comfort to the patient. The only objections to the method are esthetic ones, and as patients, particularly women patients, rarely require assistance in taking such enemas after a single instruction, this objection becomes of minor importance. The bath-room floor with the patient stripped and a bath towel under knees and chest is a most satisfactory place for this treatment because of the privacy and convenience to both toilet and water; this method is one now largely practiced in Manila.

Enemas should not be given during digestion because the reversed peristalsis usually set up by such treatment interferes with the process of digestion and may aggravate stomach symptoms already present in this disease.

A very good time to take the treatment is just before retiring at night and the first thing after waking in the morning. One enema each twenty-four hours usually will be found sufficient, but in many instances two a day will give quicker and more satisfactory results. More than two treatments of this character in twenty-four hours are never indicated.

SOLUTIONS

A large variety of chemicals selected largely because of their supposed amebacidal properties have been used in the local treatment of amebiasis. As a matter of fact, very few of them are endowed with appreciable amebacidal properties and it is an open question, which will be discussed presently, whether or not whatever virtue the most successful ones may have is due to their amebacidal properties.

Of the list of such substances, thymol, quinin and silver nitrate are the three which have been proved to be of greatest value.

Thymol is by far the most efficient of the known amebacidal agents and it has been my main reliance in the treatment of amebiasis since its antiparasitic properties were so thoroughly demonstrated by J. B. Thomas.[1] On account of the difficulty in getting the drug in solution in water, the following formula has been worked out and has proved to be very convenient and satisfactory:

℞	Gm. or c.c.
Thymol	25
Alcohol Glycerin āā	250

M. et Sig.—Add 10 c.c. to each liter of water used in enema.

1. Thomas, J. B.: Bull. Bur. Gov. Lab., Manila, 1904.

This gives a finished product of approximately 1 to 2,000 solution of the drug which, when the additional dilution formed by the bowel contents is considered, brings the actual intra-intestinal solution well within the antiprotozoal limits of the drug which is very actively amebacidal in 1 to 10,000 solution.

There does not appear to be any particular choice between the various quinin salts. The bisulphate is freely soluble and well adapted for use. The drug may be used in 1 to 1,000 to 1 to 500 aqueous solution depending on the irritability of the bowel. One of the principal objections to quinin is the constitutional effects often produced by its absorption from the bowel, particularly in patients who are able to retain enemas for considerable lengths of time.

Nitrate of silver frequently proves of decided benefit in solutions of from 0.1 to 1 per cent. in distilled water.

The method of action of these and various other substances frequently used in colonic lavage is not understood. Formerly the amebacidal properties were considered the most important, but careful consideration of the morbid anatomy of the disease makes this hypothesis a very doubtful one.

The parasites which are intimately associated with the lesions, and which therefore may be considered the most dangerous ones, are so buried in the tissues that there seems little likelihood of their contact with the solutions injected. These lesions are constantly discharging millions of amebas into the lumen of the bowel, and amebacidal substances may destroy these and prevent their forming new lesions. It seems rational, however, to consider the intestinal reaction due to irritation of the bowel by the solutions as being probably more important than any direct antiparasitic property of the chemicals.

The effect of acute inflammatory condition of the bowel on the chronic amebic process has been indicated above, and it is probable that much of the good of the local treatment, of whatever character, is in its irritating influence and consequent altered blood-supply on the mucosa of the colon. Practically all the substances of proved value in local treatment are irritants, and it is a generally recognized therapeutic fact that the prognosis of the disease is more favorable in irritable bowels than in the kind in which the enemas cause little or no pain or discomfort to the patient. Tuttle's ice-water injection often gives excellent results in the disease, but is seldom used because of the intense pain frequently produced by the severe reaction in the intestinal wall.

MISCELLANEOUS SPECIAL TREATMENT

As is to be expected from the chronic nature and the lack of a definite specific cure for the disease, numerous so-called specifics and especially efficient methods of treatment have been proposed from time to time. Of these may be mentioned, the saline treatment, the simaruba treatment, the bismuth treatment, tannin preparations of various kinds, calomel, metallic mercury, various crude tropical plants and several patent medicines which have secured considerable indorsement.

Some of the well-known chemicals of this list are of value in special conditions, but probably none of them are in any sense specifics, and all the rest of the remedies are useless or dangerous in the treatment of the disease.

The effect of mercury salts in the treatment of amebiasis deserves further investigation. During the last year I have had most encouraging results from the use of the protoiodid of mercury in old sluggish diarrheal types of the disease which reacted slowly to other methods of treatment.

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The drug was administered just as it would be in syphilis, tablets of 0.015 gm. each were given from two to four times a day, the quantity being determined by the tolerance of the patient, the symptoms of intestinal irritation being controlled by small doses of paregoric when necessary and the drug pushed to the point of tolerance as determined by the mouth symptoms. This treatment should be continued for one to three or more months with occasional intermissions of a few days.

Of the sixteen patients whose records are complete and satisfactory, twelve were permanently free of amebas in from twenty to ninety days, and eight of these patients whose after-histories are known to me have remained free from amebas and from clinical symptoms from three to eight months after cessation of treatment.

SURGICAL TREATMENT

Appendicostomy and cecostomy followed by colonic irrigation from above downward has been recommended by a number of surgeons, particularly in cases of amebiasis which fail to recover under other methods of treatment. Our experience in Manila with this form of treatment is very limited. Dr. McDill has performed appendicostomy for this purpose on several patients, but the results hardly have warranted a continuation of the procedure. With improved methods of medical treatment and the removal of the old opinion that rectal irrigations do not reach the cecum, the conditions usually recommended before surgical interference is attempted are very rarely seen in our work.

COMMENTS

Whatever the form of treatment used in amebiasis, the old adage to "treat the patient rather than the disease" applies with particular force. Amebaphobia and overtreatment are two important factors in preventing recovery. Amebaphobia may not be confined to patients, but too often it influences the judgment and actions of the physician in a way very unfavorable to the patient's best interest.

Overtreatment is a very common error and comes from the desire to destroy all the amebas, which is practiced without due regard to the patient's general condition and is no more consistent with good therapeutics than it would be to employ remedies in typhoid or pneumonia, looking primarily to the destruction of the micro-organisms causing these diseases.

It probably would be dangerous to consider any patient cured so long as amebas are discharged with the bowel contents, but with the patient in a satisfactory clinical condition this contingency should cause no particular alarm, because the accidents and complications of the disease are extremely rare in patients who have undergone a thorough preliminary treatment and whose clinical condition is kept in a satisfactory state by subsequent intermittent treatment.

As to choice of the methods of treatment, each case must be a law unto itself. The irrigation treatment is the main reliance, particularly in what may be termed average or usual cases. Ipecac is particularly valuable in the presence of clinical dysentery and may be tried either alone or in combination with bowel irrigation. The substance used in enemas should be arbitrarily changed from time to time in cases in which satisfactory progress is not being made by any one method of treatment.

With proper care, the prognosis of this disease is good as to recovery and, while the treatment usually requires several months, patients in the majority of cases may continue their regular vocations during treatment with an occasional rest and diet for a few days during exacerbations manifesting themselves as clinical dysentery.

In emaciated patients with old chronic cases of long standing, who have had no treatment, and in cases complicated by mixed infections and otherwise, the prognosis is not so good and the treatment of the latter requires additional consideration.

ABSTRACT OF DISCUSSION

DR. WALTER BREM, Los Angeles, Cal.: For a long time I have looked on Dr. Musgrave as my master in the study of amebic infections. A monograph which he wrote with Clegg seven years ago first interested me in the subject. I feel, therefore, a certain timidity in disagreeing with Dr. Musgrave regarding the ipecac treatment of intestinal amebiasis. But, since any investigation of the treatment of intestinal amebiasis must be based on a careful study of a few selected cases over a considerable period of time following the treatment, I feel that there may be some excuse for my speaking.

In Panama, Zeiler and I treated amebic infection for four years by irrigations. We used chiefly quinin in from 1 to 2,500 to 1 to 250 solution, and thymol in from 1 to 3,000 to 1 to 1,000 solution, and quinin and thymol combined. Our results were unsatisfactory. Two years ago, after Dr. George Dock published his paper on ipecac treatment of amebic dysentery, we decided to give this method a thorough test. In our classification of cases, we considered "amebic dysentery" a chronic condition, with acute exacerbations, characterized by diarrhea and tenesmus and the presence of blood, mucus and amebas in the stools. Our criterion of cure was the eradication of the infection, and we considered this demonstrated only by repeated examinations of the stools over a reasonably long period of time after the treatment was discontinued. We apparently cured twenty-one out of twenty-two patients treated with ipecac. About ten of these patients were followed over six months and repeated examinations of the stools were made. Several of them were followed more than a year and there was no recurrence of dysentery or reappearance of amebas.

One of our patients had amebas continuously in his stools for over two years. We tried every method known to us to rid him of the infection but failed. There were always from twenty to thirty amebas in each field of the low power lens at every examination. We finally gave this patient 120 gr. of ipecac in twenty-four hours. The amebas immediately disappeared and there has been no recurrence in over one year.

One patient we failed to cure by giving ipecac by the mouth. He had three recurrences of dysentery, and on his last admission to the hospital he was emaciated and apparently dying. Dr. Lloyd Noland did an appendicostomy on him and found the intestine thickened and diseased. Dr. Noland kindly returned the patient to us for postoperative treatment and we introduced ipecac through the appendix. In three days the amebas had disappeared from the stools; they did not reappear, and the patient made a rapid recovery. He was kept in the hospital as an orderly so that he could be watched and frequent examinations of his stools could be made. It is now five months since treatment and he is well and no amebas can be found. The conditions of the treatment render the case one of experimental value.

We had another patient whom we failed to cure by giving ipecac by the mouth. We then gave it per rectum, suspended in starch water. There were ulcers present in the rectum and we had the satisfaction of seeing these gradually heal after the enemas were given.

There are several chances of failure in the ipecac treatment of amebic dysentery and I think that these chances of failure are responsible for the conflicting reports that come from various observers. In the first place, the ipecac may be adulterated. In the second place, the salol coating may be so thin that it is dissolved in the stomach and the ipecac vomited. Third, if the pills are too thickly coated they may pass through the intestine intact without the salol coating being dissolved at all. Fourth, the matter of diet is important, for if food that resides long in the stomach is given before the ipecac, the latter also

is held in the stomach until it is vomited. No solid food should be allowed for six hours before the administration of ipecac.

Dr. Musgrave thinks that ipecac relieves the symptoms of dysentery, and is of value for that reason. My experience leads me to believe that in addition it will eradicate the infection when properly administered—that it is a specific for intestinal amebiasis, at least in the early and moderately advanced stages.

DR. W. E. MUSGRAVE, Manila, P. I.: The last word has not yet been said regarding the therapeutic use of ipecac. In general autopsy work (over 1,000 autopsies) 22 per cent. of the cases which showed the amebic ulcerations gave no manifestations of the disease during life. A patient may have the disease in the tropics, return to the United States, and show no manifestations of the disease until a late period of life, if at all.

THE PURIN CONTENT OF COMMON ARTICLES OF FOOD*

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Uric acid in the human body and its excreta has been recognized and studied for over 100 years. It was soon recognized that it had a relation to gout, that protean, baffling disease. Efforts to explain this relation drew more largely on theory and the imagination than on facts, and medical literature teems with the contention of different schools on these points.

The earlier discussions had much to say about the causative relation of the acidity or the alkalinity of the blood. These ideas penetrated to the laity and are the basis of the popular belief that acidity in the food is a potent cause in producing gout and rheumatism. Even a large proportion of the medical profession are to-day more or less influenced by the idea that the acidity of the blood has a causative relation to these conditions, oblivious of the fact that the investigations of recent years have failed to show in demonstrable facts any warranty for this belief.

New and more accurate methods of analysis were introduced about thirty years ago, which render practically valueless the observations based on previous methods. Improvements on these methods are still being made, and greater accuracy in the methods of the future may materially alter the reliability of what we to-day regard as established "facts" in this connection.

The subject is an extremely complex one—complex from the point of view of the clinician, and complex also to the physiologic chemist. Each finds problems that his present means of investigation are inadequate to solve. Everybody agrees that there is some relation between uric acid and gout, but the best authorities who are unbiased and candid stop there and admit that very little beyond this bald statement is definitely known.

The practicing physician who has kept at all in touch with the advances in this subject is indeed warranted in feeling bewildered. He sees his old theories demolished, but no new ones to take their place. Even if his old theories were wrong, they gave him a feeling of satisfaction because he thought that he knew what ought to be done. If the patient improved in the natural course of events, in spite of the physician's wrong theories, the latter had the added satisfaction of being convinced that his remedies had done the work. To-day this is all changed. His confidence is gone; the conscientious physician dislikes giving remedies on the traditional dictation of empiricism, but what can he do? He asks the physiologic chemist for bread, in the form of comprehensible directions based on known facts, and what he gets is a stone; for the average man can neither understand the answer nor apply the results.

The problem has hardly been simplified as yet by the introduction of the term "purin." Uric acid is but one of a group of substances that are closely related chemically. These substances are built chemically around a nucleus, $C_5H_4N_4$, to which the name "purin" has been given. Emil Fischer noted this fact and published the results in 1899, yet the general practitioner may look in many standard works to-day and not even find the term "purin" used.

When, however, we realize that the purin nucleus is an important constituent of nucleoprotein, and that nucleoprotein in turn is the important chemical substance of the nuclei of the body-cells; when we also recognize that the nucleus plays a most important part in cell activity; we can readily understand that some knowledge of the purin metabolism is essential to the physician if he is to appreciate at all the new knowledge about cell activity, both in health and disease, which the physiologic chemist will soon open up. At present we are only just beginning to get light on the subject, yet we can see enough to be convinced of its great importance. How much of what is now known is it essential for physicians in general to know? What practical bearing may it have on the treatment of disease?

These are the two questions that we have had chiefly in mind in elaborating this paper. We would modestly disclaim any special experience or knowledge of physiologic chemistry. Compared with the chemist we are but medical laymen, who listen to what the men of science have to say, and try to garner from the rich harvest of confusing facts and theories a few practical bits of information that may help our fellow practitioners.

The purin bodies associated with the metabolism of the nuclear elements of the body, their formulas and classification are as follows:[1]

Purin	$C_5H_4N_4$	(not yet found in the body as such)
Hypoxanthin	$C_5H_4N_4{=}O$	Oxypurins
Xanthin	$C_5H_4N_4{=}O_2$	Oxypurins
Uric acid	$C_5H_4N_4{=}O_3$	Oxypurins
Adenin	$C_5H_4N_4{-}NH_2$	Aminopurins
Guanin	$C_5H_4N_4{=}O{-}NH_2$	Aminopurins

All five are included under the term "purin bodies." With the exception of uric acid, they are known also as "purin bases."

The relation of the purin bases to nucleoprotein may be stated as follows:

Nucleoprotein = *nuclein* + protein.
Nuclein = *nucleinic acid* + protein.
Nucleinic acid = *adenin* + *guanin* (*purin bases*) + pyrimidin bases + phosphoric acid + carbohydrates.

The breaking up of nucleoprotein furnishes the purin bases, adenin and guanin. These are aminopurins, and by the replacement of the NH_2 group by O, we get, respectively, hypoxanthin or xanthin (oxypurins), and by the further oxidation of these we get uric acid.

Experiments show that these changes from the nucleoprotein of the nucleus to uric acid do take place in the body; and we believe that this process accounts for most of the nucleoprotein that is used up in the body, and explains an important source of uric acid in the body.

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

1. Based on Lusk: The Science of Nutrition, Ed. 2, 1909, p. 335.

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Such part of the uric acid or purin bodies as is derived from the cellular activity of the body itself is called endogenous. Such part as is derived from outside the body and introduced in the food is called exogenous.

We have no satisfactory way of measuring the amount of purins in the body and so our best method of measuring the activity of these processes is by the excretion of purins in the urine. Uric acid constitutes the chief form in which the purins are thus excreted, only about 10 per cent. or less appearing as other purin bodies.

If we put a person on a purin-free diet, that is, remove the exogenous source of purins, then the amount of purins in the urine falls and after a few days remains constant at a lower level. This is considered to represent the endogenous purin metabolism of the body. As might be supposed, it remains practically constant for an individual while he is on a purin-free diet, because it represents the wear and tear of his body, which is essentially a constant factor.

While the daily amount of endogenous urinary purins remains fairly constant for any individual, the amount varies considerably for different individuals in health. It will usually be found between 0.3 and 0.5 gm. daily.

If food containing a definite amount of purins is given, the amount of urinary purins rises, but does not rise by the same amount that is ingested. In other words, a part of the exogenous purins are used up in the body and do not appear as such in the urine. Authorities differ somewhat as to what proportion is recovered in the urine, but a number of good authorities place it at one-half or a little more. The rest is used up in some way that has not yet been clearly determined, but this is one of the reasons that leads to the conclusion that uric acid is in part broken down in the body and not all excreted as uric acid.

The endogenous production of urinary purins is very little affected by drugs or by any measures at our command, but the amount of purins that the body has to dispose of may be considerably reduced by limiting or excluding the purins in the food. This is desirable in gout; for while we do not know the exact relations of this disease to uric acid and the other purins, we do know that there *is* some close relation; that purin metabolism is disturbed; that the excretion of uric acid is generally lowered from normal, and that there is a tendency for it to accumulate in the body.

Exogenous purins come essentially from two sources—from the nuclei of cells in the food, and from free purins (chiefly hypoxanthin) found in muscular tissues. The chief sources are animal foods, and these are rich in purins in proportion to the number of nuclei in a given amount of the tissue. For example, glandular organs are much richer than muscle.

PURIN-FREE FOODS

Of animal foods, milk and eggs, and all articles made from them, are essentially purin-free. Fish eggs are included in this list. Cheese may include an appreciable amount of purin, if rich in bacteria.

Usually all vegetables are permissible, being practically purin-free. Seeds, however, contain a certain amount of purins in the plant embryos. In extreme cases, therefore, the use of peas, beans, corn, wheat and oats may need to be restricted or even excluded. It should be noted, however, that such objections as there may be to these seeds do not apply to flours made from them, for the process of bolting the flour removes the plant embryos.

In this connection caffein and theobromin may be mentioned. Each contains a form of purin, but they are methyl-purins. The methyl radical is much the more active, and the amounts of these substances taken would be limited by the methyl action long before the action of the purins would become objectionable. These purins may be practically disregarded in our consideration of the subject.

COMMON ARTICLES CONTAINING PURINS

These, as we have seen, are chiefly animal foods containing cells, and they are rich in proportion to the number of cells in a given amount of food.

Our knowledge of the purins and the rôle they play in the body is not sufficiently accurate to make it worth while to try to calculate the exact amounts taken in a given quantity of food, so that the exact percentage has little practical value. On the other hand, the *relative* amount in different foods has a practical value. This can be expressed conveniently by taking as a unit the amount of purins in a given weight of any food that is relatively poor in purins, and then classifying other foods as containing multiples of that unit.

A satisfactory method is to compare the foods according to the number of grams of purins in a kilogram of the food. Cod may be taken as the standard to determine our unit. Our figures are taken from I. Walker Hall.[2] There are 0.582 gm. of purins in 1 kg. of cod, so that our unit may be placed at 0.5 gm. per kilo. The common foods will be classed in groups having approximately the same amount of purins, and in each group they will be arranged from above down beginning with the lowest of the group and ending with the highest.

It will be noted that there is no difference chemically between the "red" and the "white" meats. Also note that while the common forms of white fish like cod are low in purins, other fish, like halibut and salmon, are as rich as the common meats.

PURIN CONTENT OF ANIMAL FOODS

1 unit.	Tripe. *COD.*	2½ units.	Turkey. Chicken. Beef (sirloin).
1½ units.	Plaice.	4 units.	Beefsteak.
2 units.	Mutton. Rabbit. Halibut.		
	Pork. Beef (ribs). Ham.	6 units.	Liver.
	Veal. Salmon.	20 units.	Sweetbreads. (thymus).

PURIN CONTENT OF VEGETABLE FOODS (containing more than a trace).

Two-fifths unit.	Asparagus.
Four-fifths unit.	Pea-meal.
One unit.	Oatmeal.
Six-fifths unit.	Beans.

Sweetbreads and liver must be omitted from the diet entirely whenever it is desired to limit the amount of purins ingested, and beefsteak should be used in only half the amounts that other meats are allowed. Boiling meats reduces the amount of purins, as it removes a good deal of the soluble xanthin bases, whereas these are all retained when the meat is broiled.

The method of dealing with a patient who needs to have the purins restricted would be, first, to put the patient on a purin-free diet of milk, eggs, bread and vegetables for a number of days, in order that he may rid his system of any excess of purins that are retained in the system. Then we may test his tolerance by begin-

2. The Purin Bodies of Food Stuffs; Their Estimation, Action and Significance, 1902, Chap. III.

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ning with an allowance once a day of a moderate serving of one of the articles from the table above that is rather poor in purin—that is, an article that relatively has not more than 2 cod units. The amount should not exceed 100 gm. If these lower substances are well borne, then we may try the stronger ones, but we should begin with smaller amounts, not over 50 gm. at the start. These stronger articles should not be put on the regular bill of fare, but only allowed occasionally, even if there are no apparent symptoms from their occasional use.

A word may be added about beverages. Tea and coffee may be used in moderation, if not otherwise objectionable. In general, alcohol inhibits purin metabolism. This is the objection to alcoholic drinks, rather than any question of their purin content. Beer, ale and porter contain small amounts of purin. Spirits contain none. Light wines usually agree best with gouty patients, but there is no definite rule as to the way in which gouty patients are affected by different alcoholic drinks.

One final word of caution should be added. Gout is a variable disease. Each case has its idiosyncrasies and its peculiar problems. Treatment must be individualized, and the general principles laid down may need considerable modification to meet these individual requirements. Nevertheless, the intelligent regulation of the diet so as to meet the needs of the body for nutrition and yet to limit the amount of purin ingested will remain a cardinal principle of treatment.

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DISORDERS OF PURIN METABOLISM *

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The old time term "uric acid diathesis" was an elastic expression, embracing such different conditions as gout, chronic rheumatism, uratic calculus, obesity and certain nephritides. In the light of more recent knowledge, the meaning of the term has been gradually narrowed until at the present time it includes only those diseases or clinical syndromes which are more or less intimately connected with a pathologic purin metabolism. It will be our purpose in this paper to consider those disease types which fall under this heading, to point out, as far as is possible, wherein lies the departure from normal metabolism, to formulate any general rules which can serve as a basis for rational treatment, and to bring out such facts as are known concerning special or specific therapy.

One of the most striking conditions in the uric acid diathesis is the occurrence of an increase in the uric acid content of the blood—uricemia or uricacidemia. This is not necessarily an evidence of faulty purin metabolism, however. Thus a uricacidemia and high uric acid excretion may be a result of alimentary flooding of the circulation with exogenous purin bodies, a condition quite comparable to alimentary glycosuria. Excessive nuclear destruction, as occurring in pneumonic resolution and in leukemia may also induce it. Uricacidemia is also found in a group of diseases which present in common a severe cachexia, such as carcinoma, chronic malaria, and pernicious anemia. Many of these, as hepatic carcinoma, for instance, give a largely increased uric acid excretion and a ratio of uric acid to total nitrogen which is above normal. Blumenthal[1] explains this as due to the increased body-protein catabolism of the cachexia and points out that the increase in uric acid disappears when the protein catabolism is temporarily relieved. Garrod and von Jaksch have noted uricacidemia in renal insufficiency (a retention uricacidemia). As will be seen later, normal amounts of uric acid are usually excreted in nephritis, and Magnus-Levy[2] explains this uricacidemia on the assumption that the concentration of the acid in the blood must reach a higher level than normal to pass through the kidney.

Uricacidemia, then, may be quite independent of an abnormal purin metabolism. On the other hand, variations in the amount of uric acid in the blood and urine are constant occurrences in the uric acid diathesis, and can be ascribed here only to a disorder in purin metabolism.

Of the various diseased states intimately connected with the uric acid diathesis, gout is of chief importance. Its essential pathology is unknown. The disease is associated with uricacidemia and a deposition of sodium urate in the tissues, the latter not being a result of the uricacidemia itself, but dependent on the accession of another unknown factor. The explanation of the cause of the uricacidemia in gout is not clear. It cannot at present be ascribed to an increase in uric acid formation. It persists in spite of a complete withdrawal of exogenous uric acid from the diet. The present belief is that it is a result of an anomaly of excretion. In this connection von Noorden[3] offers two hypotheses.

1. As Magnus-Levy and Minkowski have described in the case of nephritic uricacidemia, so in gout the renal cells may not be permeable to uric acid until it has reached a blood concentration greater than normal. Such an impermeability could occur without a recognizable anatomic lesion, and would be comparable to other functional insufficiencies of the kidney in which no organic structural change is observed. It is quite apart from and unrelated to nephritis. Such a functional disorder might eventuate in the chronic granular kidney of gout and this in turn increase the uricemia, but by no means could the gout be a result of the nephritis.

2. In the blood in gout, uric acid is held in a combination which is less easily excreted than normally. It is quite unknown in what form uric acid circulates in the blood normally, but that its solution depends on the alkalinity of the blood, as Pfeiffer held, has been disproved by more recent work. In the urine, His[4] has been able to obtain all the uric acid by centrifugation. In the blood, on the other hand, Bloch,[5] by this method, could obtain only a little more than half the uric acid shown by analysis to be present. It may be assumed, then, that part at least of the blood uric acid is in organic combination.

A further factor in the pathology of gout lies in the deposition of urates in the tissues. In this connection may be mentioned the recent work of Gudzent,[6] who believes that uric acid forms two primary sets of salts, which are isomeric and differ only in solubility. In nuclear metabolism there occurs first, the alpha, or lactam form. This is unstable and gradually changes in solution into the second isomer, the beta, or lactim form. This is stable. Since uric acid circulates only as a monosodium urate, these two isomeric salts are the forms in

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

* From the Laboratory of Pharmacology, University and Bellevue Hospital Medical College.

1. Blumenthal: Charité Ann., xxi, 144.
2. Magnus-Levy: Ztschr. f. klin. Med., xxxvi, 353.
3. von Noorden: Pathology of Gout, 1907, iii, 647.
4. His: Quoted by von Noorden, see Note 3.
5. Bloch: Arch. f. klin. Med., lxxxiii, 499.
6. Gudzent: Ztschr. f. physiol. Chem., lx.

which it occurs in the blood. In water the unstable or lactam form is about one-third more soluble than the stable or lactim form, and neither is very soluble. In the blood, as compared to water, the solubility of each is lessened, but not proportionately, for the stable form becomes less than one-half as soluble as the unstable form. With the transformation of the unstable into the stable form, there comes, then, a lessening in solubility and this fact explains why with its gradual accumulation in the blood there is the tendency for precipitation and deposition of urates.

In addition to the uricacidemia and deposition of urates in gout, there exist undoubtedly other pathologic factors. Of the nature of these we know nothing. They constitute what von Noorden calls the "unknown gouty factor," and on their elucidation depends the explanation of both the uricacidemia and urate deposition. It is possible that an accumulation of uric acid or allied bodies in the blood may exert a toxic effect, but this can occur only under suitable conditions, as exist in gout. That there is a definite gout toxin may well be questioned, but some evidence in this direction is afforded by the fact that while in gout there may be a nitrogen retention, yet there may be also quite definite periods of toxic destruction of protein, with increased elimination of total nitrogen and of uric acid. Such an effect might be due to an endogenous toxin such as is assumed to be active in diabetes.

It must be recognized, finally, that true metabolic gout is to be carefully distinguished from retention or kidney gout. In true gout there is an endogenous uricacidemia. Between attacks the uric acid excretion is within the normal figures, but tends toward the lower limit, thus allowing of a gradual accumulation which reaches a maximum just before an acute attack. With the attack comes a largely increased excretion, and then again a return to the lower level.

It is interesting to note that cases are occasionally found which clinically are undoubtedly gout, and yet on laboratory study present no anomaly of purin metabolism. Magnus-Levy[7] and His[8] have each reported such a case in which laboratory findings would have led to an erroneous diagnosis, because the purin metabolism was normal. Yet beyond doubt the patients were gouty. We have had a similar case in which the clinical diagnosis of gout was well sustained, although the purin excretion and reaction to exogenous purins were normal.

This case, briefly, was as follows:‡

The patient, W. G., aged 48, was a well-developed, overnourished man of large frame; English; in the United States seven years; father was subject to repeated gouty attacks. The patient was always a heavy eater, drank moderately, especially whiskey and ale, and was subject to chronic constipation. Fourteen years prior to examination the great toe of the left foot was swollen, red and painful for three days. One year later the patient had a similar attack, the onset being at night and pain very severe; dorsum of foot and ankle were soon involved. Since then the patient has had numerous attacks involving great toes, ankles, knees, elbows and wrists in order named. Except for one period of five years, he has averaged three attacks yearly. Present attack began two and a half months previous to examination in dorsum of right foot, then of left foot, then both ankles and knees. One week prior to examination the right great toe, elbow, metacarpal joint of index-finger, and wrist became acutely inflamed. Under a gout mixture containing colchicum, potassium iodid and potassium acetate, the symptoms improved and all medication was stopped in order to carry on studies on the purin metabolism. With the withdrawal of medication the joint symptoms immediately recurred with great intensity, and after three days colchicum was again administered with very quick relief. (See Table 1.)

TABLE 1.—PURIN METABOLISM IN A CASE OF GOUT. (W. G.)*

Date Mch.	Urine c.c.	NaCl gm.	Total-N gm.	Urea-N gm.	Urea-N %	NH_3-N gm.	NH_3-N %	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Purin N %	Remarks
18-21	2,000	10.56	16.90	14.64	86	.683	4	.219	.099	.318	1.8	Daily average of three normal days, no medication.
23-26	1,315	2.09	14.84	12.85	86	.622	4	.167	.042	.209	1.4	Daily average of four days' period on gout mixture.†
28-29	1,560	4.62	16.96	13.66	83	.983	6	.223	.100	.323	1.9	Daily average of two meat days, 400 gm. meat each.
30-1	1,505	6.09	16.21	13.72	84	.847	5	.177	.056	.233	1.4	Daily average of three days succeeding meat days.

* In the work tabulated, the uric acid and purin bases were determined by a modified Ludwig-Salkowski method, the urea, ammonia and total nitrogen by the methods of Benedict, Folin and Kjeldahl respectively. Diet was purin-free for three days before experiment and throughout, except as otherwise noted. In the meat (lean raw steak as weighed) was roughly 0.5 gm. purin N. Of this 0.250 gm. should have been excreted. Table shows 0.3 gm. of exogenous purins was excreted.

† Gout mixture (Pot. iodid, Pot. acetate, Vin. colchici, Syr. sarsaparilla) was begun March 22 and continued in same dosage throughout.

TABLE 2.—PARENCHYMATOUS NEPHRITIS AND GOUT. (M.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Total Purin N %	Purin-free diet throughout
May 16-17	1,490	6.85	.051	.051	.102	1.4	Daily average of two normal days.
18-19	1,580	6.71	.045	.034	.079	1.1	Daily average of two normal days with solurol 1.5 gm. each day.
20	1,760	7.60	.041	.006	.047	.6	One day, following solurol.

It has already been pointed out how closely renal insufficiency may approach gout. In fact the two conditions are often confused. A study of tables presented by many workers on purin excretion in different forms of nephritis leads to the conclusion that, in general, uric acid and purin bases are excreted in normal amounts, as compared to the excretion of healthy persons on a corresponding diet. The fact that some investigators find a decreased uric acid excretion may be very largely explained by the low protein diet so generally employed in treating nephritis. It has been stated that uricacidemia is associated with nephritis, but when the uric

7. Magnus-Levy: Deutsch. med. Wchnschr., April 27, 1911.
8. His: Quoted by Magnus-Levy, see Note 7.

‡ We are indebted to Dr. A. A. Smith and Dr. H. M. Biggs for allowing us the privilege of their wards in Bellevue Hospital, from which a number of our cases were obtained.

acid concentration reaches a certain height, the kidneys seem normally permeable to amounts above this. A reduction of uric acid excretion is most marked in advanced limitation of renal function, but even here it is not so great as is the reduction of urea, and hence indicates an extreme impairment of the renal filter. The studies that have been made on purin metabolism in nephritis justify the conclusion that the excretion of uric acid nitrogen lies within the normal limits of 0.07-0.34 gm. In a case of our own, of parenchymatous nephritis, we found a marked diminution of uric acid, however, possibly to be explained by the advanced stage of the disease, which illustrates the lack of kidney permeability. The daily average in a purin-free diet, with no medication, is shown on May 16 and 17 of Table 2.

Clinically this man presented a cardio-arteriosclerotic picture, with arthritic symptoms of pain, tenderness and swelling in both ankles and feet. It would be interesting to see whether this condition would not progress to a frank gout. One other case of chronic interstitial nephritis in our series gave normal figures for uric acid excretion, averaging in a four-day purin-free diet period, uric acid N 0.149 gm. daily, total nitrogen 11.2 gm., or 1.3 per cent.

We have studied several cases of cirrhosis of various types and in particular one which showed marked hepatic insufficiency according to the levulose test of Strauss.[9]

This patient gave a strong Wassermann reaction, had a marked alcoholic history, moderate ascites and a very definite atrophic cirrhosis. The clinical diagnosis was syphilitic and alcoholic cirrhosis. The patient was put on purin-free diet and determinations made as shown in Table 5. The purin nitrogen excretion in the initial normal period of three days averaged .266 gm., well within normal limits. This was 2.5 per cent. of the total nitrogen. On the two meat days there was a very slight rise in purin excretion, from .266 gm. to .279 gm. daily average. On the three days following, the average daily excretion was only .246 gm. This shows a complete intolerance for purins, at least in the quantity given. (See Table 5.)

Circumstances did not allow us to repeat the tolerance test with a smaller amount of meat and it is very possible that a better reaction would have been found had this been done. The purin tolerance, however, was certainly far below normal. This is just contrary to what would be expected and in the absence of any kidney lesion we are unable to offer an explanation. The table also shows a delayed excretion of the additional nitrogen

TABLE 3.—PURIN METABOLISM IN CHRONIC RHEUMATISM. (J. K.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Total Purin N %	Purin-free diet. No medication
June 5, 8, 9	1,700	15.36	.202	.072	.274	1.7	Daily average three normal days.
10, 11	1,375	15.70	.131	.099	.230	1.4	Daily average solurol two days, 2 gm. each.
12, 13	1,740	14.25	.139	.083	.222	1.5	Daily average two days following solurol.

TABLE 4.—PURIN METABOLISM IN RECURRING ACUTE ARTICULAR RHEUMATISM. (G. K.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Total Purin N %	Purin-free diet
May 15, 16, 17	1,570	18.35	.266	.066	.332	1.8	Daily average three normal days. No medication.
June 5, 6, 7	1,715	17.75	.271	.082	.353	2.0	Daily average three normal days on constant salicylate medication.
8	1,325	11.02	.187	.048	.235	2.1	One day. Some medication, 2 gm. solurol.
10, 11	1,200	15.55	.200	.093	.293	1.9	Daily average two days following solurol. Same medication.

In a series of purin metabolism studies, Badt has reported two cases of mixed gout and nephritis with subnormal purin excretion. From a comparison of these with nephritis alone and with pure gout, he concludes that gout plus nephritis gives an especially low purin excretion.

Few diseases have popularly been more closely connected with uric acid disorders than rheumatism, yet acute rheumatism seems entirely separate from primary purin disturbance. As for chronic rheumatism it is impossible at present to arrive at a judgment, since this term embraces an indefinite group of disorders more or less related clinically, which are only slowly being separated.

We cite in Tables 3 and 4 the findings in two cases of rheumatism coming in our series.

Consideration of the fact that the major part of uric acid destruction normally occurs in the liver, would lend probability to the view that any disease process which limits the functional power of the liver would seriously disturb purin metabolism. This view is supported by the occurrence of increased uric acid excretion in hepatic cirrhosis and acute yellow atrophy. It might also in part account for the uricemia often found in hepatic carcinoma.

to be expected from the meat, but this may be explained by the fact that the meat probably replaced other constituents of the purin-free diet, as no effort was made to control the nitrogen intake. The relation of functional efficiency of the liver to purin metabolism is shown to be a complex matter and valuable results should follow further work on this problem.

In discussing the therapy of abnormal purin metabolism, uricacidemia should first be considered. As its ultimate cause is unknown, the first rational step is toward its reduction by any means at hand. It has been shown that this cannot be effectually accomplished through efforts at lessening endogenous formation of uric acid. As the exogenous sources of uric acid are so largely under dietetic control, the regulation of these becomes a matter of primary importance. Could the uricacidemia be prevented by merely keeping the patient on a purin-free diet, the therapeutic problem would be a simple one. Unfortunately a condition obtains which, for purposes of illustration, may be compared to that in diabetes. In complete diabetes the body loses entirely the ability to utilize not only the carbohydrates of the food taken, but those arising from the tissue metabolism as well. So, in a complete derangement of purin met-

9. Strauss: Deutsch. med. Wchnschr., 1901, p. 757.

abolism, it might be assumed that there is an inability to care for the purin of endogenous as well as exogenous origin. The analogy is not complete because derangement of endogenous metabolism may mean more than inability to care for purins after their formation. Here the break may occur in any part of the complex chain of nuclear metabolism. The analogy is serviceable, however, to illustrate the principle of dietetic therapy, for just as in diabetes, so here it is highly desirable to determine the tolerance of the patient, to increase this if possible, and to arrange a diet which does not exceed it. It is practically impossible to keep a patient on a purin-free diet for months and years, and further it is doubtful if such a measure is at all necessary.

The determination of the purin tolerance is a matter of no great difficulty. The manner of procedure is as follows:[10]

First, the endogenous total purin excretion is determined, during a period of purin-free diet. Then 400 gm. lean beef (raw weight) are added to the dietary on each of two consecutive days, and the total purin excretion determined as before. This amount of meat contains on an average 0.24 gm. purin N. Of this about 50 per cent. should be excreted for each meat day, so that the total purin excretion should be increased by 0.24 gm. if metabolism is normal. It has been found that while the excess purins from the meat may be excreted rapidly, often two or even three days are required for their complete elimination. In such cases it becomes necessary to compare the total purin output of the two meat days, plus the three succeeding days, with the output during the fore period of purin-free diet, in order to determine whether the exogenous purins from the meat have been normally excreted. If the rise in output is less than 50 per cent. of the ingested purin it shows an inability of the body to handle the purins of 400 gm. meat, and the test must be repeated, using smaller amounts. The tolerance for purins is established, then, just as is the tolerance for sugar in diabetes. (See Table 6.)

With the purin tolerance known, the diet is so adjusted as to contain just under this value of purins. There are two reasons for this: first, if the body can accommodate a certain purin quantity, there is no occasion for cutting off all purins with the consequent further limitation of the dietary; second, it has been found that the tolerance for purins increases when the diet contains a quantity just under what the body can manage. This is quite in line with the increase in tolerance often seen in diabetes.

When the purin tolerance is subnormal, the purin intake must be correspondingly restricted to that quantity which the organism can utilize without risk of causing uric acid retention and accumulation. If the tolerance is very little below normal, an occasional course of two to four weeks on strictly purin-free diet is highly advantageous, in order, as it were, to allow the organism to "catch up." Such purin-free periods undoubtedly have a beneficial effect in preventing uricacidemia and possible acute exacerbations.

Among the patients whose tolerance we have studied is the one of gout already described (Case 2). This man reacted normally to an addition of 400 gm. meat to his purin-free dietary and only long-continued study could show whether he had periods of comparative intolerance for meat.

But even though purin tolerance is apparently normal, it must yet be considered whether the reserve tolerance for amounts of purin above the normal is lessened or entirely lost. In such a case excesses in diet would have a direct effect in producing uricacidemia. Again, a decrease in the reserve tolerance may be followed by inroads on the normal tolerance and thus dietary excesses lead to a gradual onset of true gout.

As von Noorden and Schliep point out, if purin tolerance is normal to 400 gm. meat, the reduction of purin diet below this is unnecessary, but consideration of the reserve tolerance may indicate very definitely a regulation of amounts over this figure.

In acute attacks of gout, purin-free diet is certainly indicated in the effort to reduce the uricacidemia, even though it be recognized that the acute attack may be a conservative and protective process, designed to relieve suddenly a uricacidemia which has been gradually increasing over a varying length of time.

Regulation of purin diet, then, has a very definite place in the direct treatment of both chronic and acute disorders of purin metabolism, and, in addition, is of primary importance in the prophylaxis of these disorders.

A question as yet unsettled is whether the tolerance for meat purins is a measure of the tolerance for the

TABLE 5.—RESULTS OF PURIN-FREE DIET IN SYPHILITIC AND ALCOHOLIC CIRRHOSIS. (F.)

Date	Urine	Total N	Urea-N		NH_3-N		Uric Acid N	Purin Base N	Total Purin N		Diet purin-free throughout, except as below
May	c.c.	gm.	gm.	%	gm.	%	gm.	gm.	gm.	%	
8, 9, 10	1,380	10.54	8.43	80	.945	8	.188	.078	.266	2.5	Daily average three normal days.
11, 12	1,660	10.66	8.97	84	.471	4	.155	.124	.279	2.6	Daily average two meat days. Diet + 400 gm. meat each day.
13, 14, 15	1,760	11.63	8.51	73	.567	4	.158	.088	.246	2.1	Daily average three days following meat days.
16, 17	1,450	11.04	8.66	78	.922	8	.182	.070	.252	2.2	Daily average two days, each + solurol 1.5 gm.
18, 19	2,155	13.00	10.57	81	.919	7	.218	.078	.296	2.2	Daily average two days following solurol days.

TABLE 6.—CASE ILLUSTRATING NORMAL PURIN TOLERANCE. (McC.)

Date	Urine	NaCl	Total N	Urea N		NH_3-N		Uric Acid N	Purin Base N	Total Purin		Remarks Purin-free diet throughout, except as below
	c.c.	gm.	gm.	gm.	%	gm.	%	gm.	gm.	gm.	%	
Mch. 16-17-27	955	7.54	9.26	7.50	81	.567	6	.122	.067	.189	2.0	Daily average of three normal days.
28	1,080	7.55	14.48	12.01	82	.897	6	.211	.026	.237	1.6	Diet + 400 gm. meat.
29	870	7.17	11.07	9.32	84	.625	5	.133	.035	.168	1.5	Day succeeding meat day.
Apr. 18-22	1,240	10.36	11.25	9.62	85	.684	6	.129	.054	.183	1.6	Daily average five days normal.
26-27	1,755	13.05	14.94	11.95	80	....	.	.205	.113	.318	2.1	Daily average two meat days, 400 gm. each.
28-30	1,260	8.20	13.26	....	..	....	.	.111	.036	.147	1.1	Daily average three days succeeding meat days.
May 5	1,085	9.53	11.35	9.49	83	.868	7	.181	.037	.218	1.9	One normal day.
6	1,500	11.03	13.85	11.52	83	.832	6	.179	.048	.227	1.6	+ 1.5 solurol.

10. Von Noorden and Schliep: Berl. klin. Wchnschr., 1905, p. 1297.

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purins from other sources. In other words, do food purins from all sources influence the body alike? It is well known that caffein and its congeners are not oxidized to uric acid, but are excreted as xanthin compounds. Hence caffein does not increase the output of uric acid. The inter-relations of food material, leukocytosis, and body temperature are of great importance in this line of study, but our present knowledge here is most rudimentary.

Certain drugs, as salicylic acid and antipyrin, have been credited with a power of decreasing synthetic purin formation or of changing the destructive process in nuclear metabolism. There is no valid experimental proof for this, however, and we must attribute any good results from these drugs, as in the case of colchicum, to other actions, either in facilitating uric acid elimination or as analgesics.

The discussion of any metabolic disease must allow a prominent place for the possibility of a specific therapy. And so in purin disorders, we must consider whether there may be some means of striking directly at the root of the whole purin pathology. On the hypothesis of von Noorden, that uric acid in gout circulates in some abnormal form or combination which is less easily excreted than normally, and remembering the probability that uric acid is responsible in some way for the toxemia of gout, the search for a specific remedy narrows itself to some means of restoring the excretability of uric acid. In trying to find some agent to accomplish this, one naturally turns first to the source of uric acid, the nucleic acids. These vary somewhat, according to the organ from which they are derived, but their general properties are quite similar. They have the property of preventing the precipitation of uric acid *in vitro*, in acid solution. And there is a possibility that uric acid circulates in the blood as a nucleic acid combination. Seo[11] found that one molecule of nucleic acid would combine in some way with two molecules of uric acid *in vitro*. He cites a series of animal experiments showing that uric acid is excreted faster in this combination than when injected as such.

Minkowski[12] suggests that a nucleic acid from which all the purin content had been split off would fulfil the conditions. Such a body was believed to exist in nucleotin-phosphoric acid, or thyminic acid. But it is impossible to remove the entire purin content from nucleic acid without disrupting the nucleic nucleus, and thyminic acid appears to be not a definite compound, but a mixture of several bodies. Bendix and Rücker[13] have conducted investigations with what was supposedly a purin-free thyminic acid. They found a largely increased uric acid excretion, and in a case of gout believed that the tophi showed a decrease in size. But according to Minkowski this thyminic acid contained a certain quantity of purin which might have accounted for the increased uric acid elimination.

In 1905, and again in 1908, articles appeared in the London *Lancet* by Fenner detailing remarkable results attained in the treatment of gout by the use of a thyminic acid preparation, known as "solurol." Unfortunately his clinical results were not controlled by chemical analyses. We have secured a quantity of this substance and studied its effects. According to the manufacturer, solurol is purin-free, and corresponds to a formula $C_{18}H_{23}N_3P_2O_{12}$, which would give a nitrogen content of 8.1 per cent. Our analysis gave 4.57 per cent. total nitrogen, of which nearly one-third, or 1.75 per cent., was purin nitrogen. The results we obtained with its use are given in Tables 2 to 6.

We have been unable so far to study its effects in a case of pure gout, but in the case of mixed gout and nephritis no increase, but a decrease, in uric acid excretion was noted. It is only fair to add that the manufacturers state that solurol has no effect on uric acid metabolism in non-gouty individuals, a statement with which our results fully agree.

In concluding this interesting phase of specific therapy we can only say that while no very tangible therapeutic results have as yet been attained, future work may develop a very definite line of treatment.

Finally, with regard to specific therapy, the effects of radium are to be considered. Gudzent,[14] whose work on the isomerism of uric acid salts has already been cited, assigns to radium the rôle of a reversible ferment and has shown that under its influence the stable and less soluble urate may be transformed back into the more soluble form. His results have been confirmed by Bechhold and Ziegler,[15] and it seems established that radium emanations may hinder the deposition of urates in the tissues, and favor their elimination by the kidney. Corroborative of this is the finding that the waters of certain mineral springs, such as Baden-Baden, are radioactive, and that treatment with such waters[16] brings about an increase in the elimination of uric acid. Literature is gradually accumulating on this subject, and although there is at present a lack of accurate experimental work, future investigations offer much promise.

11. Seo: Arch. f. exper. Path. u. Pharm., lviii, p. 75.
12. Minkowski: Nothnagels Spec. Path. u. Therap., lxxii.
13. Bendix and Rücker: Quoted by Minkowski.
14. Gudzent: Deutsch. med. Wchnschr., 1895, xxi, 921.
15. Bechhold and Ziegler: Berl. klin. Wchnschr., 1910, p. 712.
16. Aerztlich. Mitteil. aus und für Baden, 1909; also Wilke: Ztschr. f. phys. diat. Therap., 1909.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. ARNOLD AND LARRABEE AND REED AND WALLACE

DR. THEODORE G. DAVIS, Los Angeles: I wish to suggest the pathology of gout in this connection. Uric acid has a distinct circuit in the body. The affected cells in the kidneys do not eliminate. To me the pathology of pure gout in the joints is an infection which reduces or splits the uric acid from its combination which is soluble and precipitates an insoluble urate. That has been my view of gout for a long time.

DR. L. DUNCAN BULKLEY, New York: The diet is of extreme importance. Not long ago we continued giving white meats, chicken, etc., in these various conditions, and it is relatively recently that we have found that we could not give even sweetbread. Analysis now shows that these various substances, which we have heretofore allowed, are as injurious as red meat. Many patients come to me who have been eating sweetbreads, thinking them harmless, and they were simply piling up the nitrogen products which lead to the purin disorders. I think all this modern study helps us greatly along dietary lines. I mentioned yesterday a certain diet which I find of much practical value. I made a number of purin studies some two or three years ago, but pressure of work was too great to permit of my long giving the necessary time to it. I find a diet of rice, bread and butter and water supplies quite sufficient calories to sustain the patient for an almost indefinite length of time, although I commonly give it for only a period of five days, and return to it later if necessary. I find that my gouty patients and my patients with imperfect uric acid elimination are so enormously benefited by a period of absolute nitrogen-free diet that I cannot help urging again the immense value of a strictly vegetarian diet in many conditions. I mentioned yesterday that I had myself tried the rice diet on three occasions with a remarkable result. I did not measure the purin elimination, I am sorry to say, but did

establish the nitrogenous output. I analyzed my own urine immediately after taking absolutely nothing but bread, butter, rice and water for five days, and found that I excreted more uric acid than I had on the day before I began it. I have been suffering from uric acid for a long time. Thus, after five days of nitrogen-free diet there was actually a higher percentage of uric acid excreted than before, which was of course obtained from the tissue, thereby relieving the system of effete nitrogenous matter.

DR. LAWRENCE LITCHFIELD, Pittsburgh, Pa.: In connection with what has been said regarding the endogenous and exogenous purins, I would like to report the case of a patient who had been on a purin-free diet for several years, and who had distinct gouty symptoms following ten days after an operation for acute appendicitis.

DR. H. D. ARNOLD, Boston: Practically, the question whether the body can handle 400 gm. of meat a day has very little importance. There are in 400 gm. of meat, somewhat depending on the kind of meat, perhaps 75 to 80 gm. of protein. I think 90 gm. of protein is an abundance for anybody, including the protein of eggs, bread, milk and our ordinary articles of food. Now, if we have a case in which we need to investigate the tolerance for purins, it seems to me we certainly have a case in which metabolism is distinctly disturbed, and we would naturally have our patient on a low protein diet. For scientific purposes, therefore, in order to establish a measure of tolerance of body for purins, the 400 gm. may be a very useful test; but if the laboratory investigators are to give us clinical men something really useful, the thing we are really interested in is the disturbance in purin metabolism that occurs with amounts of meat that we are likely to give such patients. This would be far below 400 gm.

PERNICIOUS VOMITING OF PREGNANCY*

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A subject involving so many questions, to be answered with our present incomplete knowledge of physiology, chemistry and pathology, must from necessity be far from solution. It is the object of this paper, from the recent work which has been done on the toxemias of pregnancy, to draw some conclusions as to where we stand in regard to the differentiation, treatment and prognosis of pernicious vomiting.

REPORT OF CASE

The following case of pernicious vomiting presents characteristics of the three theoretical types: reflex, neurotic and toxic, and is therefore presented:

A woman, 29 years old, when married one month became pregnant. At about the fourth week vomiting began, and became so severe that in the tenth week, her physician deemed it necessary to induce abortion. It is interesting that a portion of the placenta was retained and that vomiting continued until this came away, a few days later.

Five months afterward the patient became pregnant a second time, and in the fourth week the same type of vomiting returned. This was severe and had continued for two weeks when she came under my care. The patient was able to eat practically nothing and had lost considerably in weight. A twenty-four-hour specimen of urine taken at this time was 720 c.c. in amount, contained 7.53 gm. of nitrogen and an ammonia coefficient of 3.9 per cent. The patient was thoroughly discouraged and felt that, as before, only the termination of pregnancy could end the nausea. The nervous element was marked and for two days suggestion was tried with some success. A pelvic examination then made revealed a cyst, the size of a small orange, arising from the left ovary, and in front a two-months' pregnant uterus pushed upward so as to be palpable above the symphysis pubis.

The patient was seen by Dr. C. A. Powers of Denver in consultation, and two days later, having assured the patient that the vomiting would cease, I removed the cyst, a dermoid. This assurance was given for the mental effect. Following the operation, in spite of ether, there was for twenty-four hours, no nausea. On the following day, however, when a little albumin water was given the vomiting returned. Rectal feeding of dextrose solution was then started; the patient gradually improved, became encouraged, and little by little food was taken by the mouth.

Two weeks after the operation there was still some vomiting; the twenty-four-hour specimen of urine was 1,230 c.c. in amount, contained a trace of acetone and diacetic acid; 5.78 gm. of nitrogen, and an ammonia nitrogen ratio of 6.2 per cent. On this day a severe spell of nausea returned and the patient again completely discouraged, stated she could not continue. She was given to understand that under no consideration would abortion be induced and from that time there was practically no vomiting. The amount of food was increased and in ten days the acetone and diacetic acid had disappeared. The remainder of the pregnancy was normal, and a healthy child was born at term.

In this patient, the presence of a dermoid cyst associated with vomiting was only a coincidence. The neurotic element was an important factor, and though the ammonia coefficient was at all times low, and the urinary picture one which could be explained by starvation alone, I would consider this a case of vomiting of a mildly autotoxic nature.

BRIEF HISTORY

Williams,[1] in 1906, gave a complete review of the subject, vomiting of pregnancy, and suggested that the evidence seemed to justify the differentiation of three distinct types of pernicious vomiting, namely—reflex, neurotic and toxic.

The reflex type, first brought into prominence by Graily Hewitt,[2] who wrote extensively on the subject, is dependent on some abnormality in the generative tract for its origin. There are several reports of cases in which, after the removal of an ovarian cyst (Krassowsky[3]) or the correction of a retroverted pregnant uterus (Frank and Hunter[4]), vomiting has stopped immediately.

Kaltenbach[5] was the first to call general attention to the neurotic type, when, in 1890, he stated that practically all vomiting of pregnancy was due to a neurosis and was amenable to suggestion. While experimental evidence (Blumreich and Zuntz[6]) leaves little doubt that there is an increased nervous irritability during gestation, certain observers (Kaltenbach and Ahlfeld[7]) would attribute most of the disorders of pregnancy to this factor.

The autotoxic nature of vomiting was first definitely suggested by Lindemann.[8] In 1892 he reported the autopsy of a woman who had died with neuritis associated with vomiting. Both the mother and the child showed parenchymatous neuritis and cloudy swelling of liver and kidneys, whereby he concluded that only some

* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

1. Williams: Pernicious Vomiting of Pregnancy, Bull. Johns Hopkins Hosp., 1906, xvii, 71.
2. Hewitt: The Vomiting of Pregnancy: Its Causes and Treatment, Tr. London Obl Soc., 1871, xiii, 103; The So-Called Uncontrollable Vomiting of Pregnancy, ibid, 1885, xxvi, 273; The Severe Vomiting of Pregnancy, Tr. Am. Gynec. Soc., 1888, xiii, 218.
3. Krassowsky: Les vomissements incoercibles de la grossesse, Ann. de gynéc. et d'obst., 1894, xli, 37.
4. Frank and Hunter: Therap. Gaz., 1906, xxx, 372-7.
5. Kaltenbach: Ueber Hyperemesis gravidarum, Ztschr. f. Geburtsh. u. Gynäk., 1891, xxi, 200.
6. Blumreich and Zuntz: Exper. u. klin. Beitr. zur Path. d. Eklampsie, Arch. f. Gynäk., 1902, lxv, 737.
7. Ahlfeld: Hyperemesis gravidarum, Ptyalismus, Hysterie, Centralbl. f. Gynäk., 1891, xv, 329.
8. Lindemann: Zur path. Anat. d. unstillbaren Erbrechens d. Schwangeren, Centralbl. f. allg. Path. u. path. Anat., 1892, iii, 625.

circulating toxin could be at fault. Matthew Duncan[9] had previously called attention to the liver in hyperemesis and reported a case in which the changes were those of acute yellow atrophy. In 1885 Roughton[10] substantiated Duncan and made the statement that the liver in normal pregnancy often shows mild grades of the more extensive lesions seen in fatal disorders.

It was not, however, until 1901 that the hepatic lesions were brought into prominence. De Ribes and Saint Blaise[11] reported definite liver lesions in vomiting, and described the liver of a woman who had suffered throughout her pregnancy with hyperemesis, and died in the latter part with convulsions. The liver changes they considered identical with those of eclampsia, and drew the conclusions that the two were the result of a functional disturbance of the liver; that vomiting constituted a prelude to eclampsia and that the two had the same anatomic basis.

Frank,[12] in 1893, made the first study of the metabolism in vomiting. He found the amount of nitrogen in the urine greater than that taken in the food, so came to the conclusion, which had long been held, that death was due to starvation. In 1894 Davis[13] noted the low urea output in the urine, a point used by Saint Blaise[14] in his argument that vomiting is a prelude of eclampsia. Pierrehughes[15] and Meillère,[16] later, independently observed that though the elimination of urea was small, enough sodium hypobromite solution was decomposed to indicate the presence of a normal urea content. We now know that this would indicate the high ammonia coefficient recognized by Williams as being of prognostic importance.

The first definite observation clearly indicating the toxic nature of vomiting of pregnancy, accompanied by liver necrosis resembling acute yellow atrophy, and by changes in the urinary nitrogen, was made by Stone[17] in 1903. He reported the autopsy findings in a fatal case of vomiting, in which the liver showed the entire central portion of each lobule to have undergone complete necrosis, while the peripheral portion showed signs of fatty degeneration, with only a few cells remaining perfectly normal.

Ewing,[18] in 1904, confirmed these observations, and with a further series of cases came to the conclusion that "persistent vomiting, acute yellow atrophy, and eclampsia are closely related conditions of metabolic, and chiefly hepatic origin, and that chemical analysis of the urinary nitrogen gives indications in support of this view, and should be employed in diagnosis." Edgar,[19] the same year, advanced similar views. In 1906, Williams[1] with a report of cases gave his reasons for believing that pernicious vomiting and eclampsia are not manifestations of an identical toxemia, and in the classification of reflex, neurotic and toxic types, stated that the latter, by a study of the ammonia nitrogen ratio, could be diagnosed and the treatment ordered.

CONSIDERATION OF REFLEX, NEUROTIC AND TOXIC TYPES OF VOMITING

In consideration of these three types, reflex, neurotic and toxic, there is considerable clinical evidence of a reflex variety of vomiting. Many of the cases once considered of this nature are no longer, however, classed as such. While it is generally accepted that reflex vomiting exists, it is extremely rare, and authorities state that this form does not assume the character observed in the toxic variety. As regards the neurotic type, though it is universally agreed that the nervous system forms a part of an intrinsic picture, that it is alone responsible for the vomiting is improbable. Ordinarily, pernicious vomiting begins as the simple nausea and vomiting of pregnancy and becomes more and more severe. For a symptom to be so common as to appear in 50 per cent. of all cases, it is natural to consider a certain etiologic factor necessary, and the theories seem to point to this being an autotoxemia of some sort. Hofbauer[20] has asserted that the livers of all pregnant women show some fatty degeneration of the central portion of the lobule, a lesion which in fatal cases of pernicious vomiting is pronounced.

According to Ewing and Wolf[21] and others, the urine of practically all pregnant women shows some signs of perverted nitrogen metabolism, a high undetermined nitrogen, and an increased ammonia coefficient. Strauss[22] has reported cases in which, following suggestion, vomiting has ceased immediately, though the patient died hours later from the effect of the toxemia. If the vomiting were purely hysterical it would never end in death.

While it is possible that those cases in which the ammonia coefficient is low are a distinct non-toxic type, a high ammonia need not be present in all cases of toxic vomiting. Sufficient injury to the liver cells need not have been produced to reduce its ureagenic function. Patients in this class not showing high ammonia, and consequently less liver destruction, almost invariably recover. It is admitted here that the nervous control is an important element, but that the vomiting is augmented by a neurosis seems more logical than that it is a distinct cause for the condition.

THEORY OF ETIOLOGY

The theories of the etiology of the toxemias is a long story in itself, and will not be touched on further than to say that at the present time, mainly from the work of Weichardt[23] and Hofbauer, the belief is prevalent that there is a toxin of placental origin. Definite poisons have been sought for in the blood, fetus and placenta, but with no uniformity of results.

Since Fischl,[24] in 1884, reported a case of severe hyperemesis of pregnancy, cured by evacuation of a densely packed colon, intestinal putrefaction has been recognized as a factor or even a cause in this condition. It has been shown by experiment that a liver already the seat of functional disturbance is further injured by

9. Duncan, Matthew: Hepatic Diseases in Gynecology and Obstetrics, London Med. Times and Gaz., 1879, i, 57.
10. Roughton: Pernicious Vomiting of Pregnancy, Lancet, London, 1885, ii, 425.
11. de Ribes (de Ribes and St. Blaise): Note sur un cas de vomissements incoercibles avec autopsie, Compt. rend. Soc. d'obst., de gynéc. et de pédiat. de Par., 1901, iii, 95-97.
12. Frank: Ueber Hyperemesis gravidarum, Prag. med. Wchnschr., 1893, xviii, 11, 24; Ueber Hyperemesis gravidarum, Centralbl. f. Gynäk., 1898, pp. 448-449.
13. Davis: Toxemia of Pregnancy, Am. Jour. Med. Sc., 1894, cvii, 147.
14. Saint Blaise: Les autointoxications gravidignes, Ann. de gynéc. et d'obstét., 1898, i, 342, 372.
15. Pierrehughes: Etude critique sur les vomissements incoercibles de la grossesse, Thèse de Paris, 1902.
16. Meillère: Sur quelques cas de rétention des chlorures, Compt. rend. Soc. de biol., 1902, liv, 1135.
17. Stone: Toxemia of Pregnancy, Am. Gynec. Jour., 1903, iii, 518; New York Med. Jour., 1905, lxviii, 295.
18. Ewing: The Pathologic Anatomy and Pathogenesis of the Toxemia of Pregnancy, Am. Jour. Obst., 1905, ii, 145.
19. Edgar: Hepatic Lesions in Obstetric Practice, THE JOURNAL A. M. A., 1905, xliv, 1077.
20. Hofbauer: Beiträge z. Aetiol. u. z. Klinik d. Graviditätstoxicosen, Ztschr. f. Geburtsh. u. Gynäk., 1907, lxi, 200.
21. Ewing and Wolf: The Clinical Significance of the Urinary Nitrogen: II. The Metabolism in the Toxemia of Pregnancy, Am. Jour. Obst., xv, No. 3; Am. Jour. Med. Sc., cxxxi, 751.
22. Strauss: Am. Jour. Obst., 1906, liii, 164.
23. Weichardt: Exper. Studien. u. d. Eclampsie, Deutsch. med. Wchnschr., 1902, p. 224; Ueber Eiweissüberempfindlichkeit, Centralbl. f. Bakteriol., 1905, iii, 77.
24. Fischl: Zur. Genese der Hyperemesis gravidarum, Prag. med. Wchnschr., 1884, ix, 222, 229.

injection of indol. It is then probable that the absorption of these products of putrefaction is an *additional* element in toxic vomiting of pregnancy.

Several articles have been written of late on the functions of the various glands which point directly or indirectly to their relation to the toxemias of pregnancy. Metabolic studies on the influence of the thyroid and parathyroid secretions show analogies which furnish much to explain the urinary changes observed in pernicious vomiting. The successful use of thyroid extract in hyperemesis of pregnancy by Siegmund,[25] and of epinephrin by Rebaudi,[26] are evidences of the therapeutic application of this idea.

There is abundant evidence of the close interrelationship of the ovaries with the thyroid gland (Goodall and Conn[27]). In view of our recent knowledge of hormonic influences, it may well be asked if pernicious vomiting of pregnancy is to be explained by the action of some hormone from fetal tissue, uterus, or ovary acting on those glands which govern metabolism, depressing or stimulating them to pathologic activity.[28] The toxemia of menstruation, which, as shown by Keiffer,[29] exhibits the same clinical phenomena and urinary changes observed in the toxemias of pregnancy, seems in accord with such an hormonic relation.

Accompanying the removal of the parathyroid there is an increase of ammonia in the blood. Carlson and Jacobson[30] find that the ammonia-destroying power of the liver is reduced as much as 30 per cent. after parathyroidectomy in animals, and this reduction they attribute principally to loss of liver function rather than to acidosis. Underhill and Saiki[31] demonstrated that the removal of the thyroid and parathyroid was accompanied by an increase of ammonia in the urine even beyond what is observed in starving animals. The loss of calcium noted by MacCallum and Voegtlin[32] following parathyroidectomy is in line with the observations of Mitchell,[33] Drennan[34] and others, who would explain the toxemias by this factor.

Histologic variations in the thyroid, parathyroid and suprarenal glands have been noted during gestation by different observers, but the results of their observations have not been constant. Investigation concerning the function of these organs, while too recent to permit of positive statements, promises much in solution of the toxemia of pregnancy.

CONSIDERATION OF URINARY CHANGES

Since Hahn, Pawlow, Massen, Nenchi[35] and others showed that accompanying the establishment of an Eck fistula, there is an increase of ammonia and a decrease in the amount of urea in the urine; the dependence of urinary changes on liver function has been generally accepted. This belief has been sustained by later investigation which shows that the portal blood contains about four times the amount of ammonia salts found in arterial blood. Accordingly, in pernicious vomiting the high undetermined nitrogen, and the high ammonia without acetone derivatives, are thought to indicate desamidization dependent on liver injury.

That the perversion of urinary nitrogen in toxic vomiting is dependent on some additional factor other than liver injury alone is probable, from the results of metabolic studies in artificially produced hepatitis. After considerable destruction of liver tissue with hemolytic serum, Pearce and Jackson[36] found little urinary change. The liver lesion in hyperemesis is practically identical with that of chloroform poisoning, yet in the latter condition when there was extensive degeneration, Howland and Richards[37] observed a high total nitrogen, a very slight increase in the percentage of ammonia, and undetermined nitrogen.

From what has been said of the apparent relation of the several glands to the toxemia of pregnancy, and their influence on proteid metabolism, it is possible that their activity is the additional factor determining the nitrogen partition in pernicious vomiting.

In a recent article, Underhill and Rand[38] have stated that the urine in vomiting of pregnancy shows no significant change so long as the patient is able to retain a sufficient amount of nourishment; that, in fact the whole picture may be accounted for by inanition alone. While it is generally admitted that starvation has undoubted influence on nitrogen partition, because of the apparent significance of urinary interpretations, their criticism, if founded, is of practical importance.

Concerning the presence of leucin and thyrosin, Underhill and Rand state that the figures used by Stone to represent the undetermined nitrogen are so low that it is difficult to see how these substances could be present in sufficient quantities to crystallize; that the lead method of determining them is inaccurate; that they were not found in the cases reported by Williams, or in their own series, and that until further evidence, more convincing, is offered, their presence cannot be said to be established.

They believe that the undetermined nitrogen, emphasized by Ewing and Wolf, does not necessarily indicate deficient desamidization. A portion of the creatin and hippuric acid have not been included in this factor, and the employment of the Pfaundler method has been found to be unreliable. The existence of this perversion, they state, is apparent rather than real, since too great reliance has been placed on so-called normal ratios without due consideration of normal variations.

These same observers state further that little reliance can be placed on percentage values in the determination of whether a urine is normal. Williams' theory, that when the ammonia reaches 10 to 15 per cent. of the total nitrogen, the patient is in grave danger, cannot be accepted as a diagnostic measure. Its employment as a working hypothesis in treatment will inevitably lead to erroneous conclusions.

In a recent article this inanition theory has been disputed by Ewing,[39] who states that "neither the clinical

25. Siegmund: Zentralbl. f. Gynäk., 1910, No. 42.
26. Rebaudi: Zentralbl. f. Gynäk., 1909, No. 44.
27. Goodall and Conn: Relation of the Thyroid Gland to the Female Generative Organs, Surg., Gynec. and Obst., May, 1911.
28. An increase in the ammonia and amino-acid nitrogen percentage is present in the urine of the normal pregnant woman (Hoffbauer) when but a slight liver lesion exists; if, as in chloroform poisoning, a similar but extensive process does not produce this urinary change, something besides the hepatitis must be found to explain the picture. From the analogies produced in the urinary nitrogen by hypothyro-parathyroidism, and the apparent relation of these glands to pregnancy and toxemias, it seems that such an idea of a derangement of hormonic relationship should be entertained.
29. Keiffer: La menstruation dans ses rapports avec la pathologie gén., Jour. Obstétrique, 1897, ii, 289.
30. Carlson and Jacobson: Proc. Soc. Exper. Biol. and Med., 1909, i.
31. Underhill and Saiki: Jour. Biol. Chem., October, 1908.
32. MacCallum and Voegtlin: The Relation of the Parathyroid to Calcium Metabolism, Bull. Johns Hopkins Hosp., 1908, xix, 91.
33. Mitchell: Med. Rec., New York, Nov. 19, 1910.
34. Drennan: Am. Jour. Obst., April, 1911, p. 653.
35. Hahn, Pawlow, Massen, Nenchi: Arch. f. exper. Path. u. Pharmakol., 1893, xxxii, 161.
36. Pearce and Jackson: Experimental Liver Necrosis, Jour. Exper. Med., 1907, ix, 552.
37. Howland and Richards: An Experimental Study of the Metabolism and Pathology of Delayed Chloroform Poisoning, Jour. Exper. Med., 1909, xi, No. 2.
38. Underhill and Rand: The Peculiarities of Nitrogenous Metabolism in Pernicious Vomiting of Pregnancy, Arch. Int. Med., January, 1910, v, 61.
39. Ewing: The Pathogenesis of the Toxemia of Pregnancy, Am. Jour. Med. Sc., June, 1910.

symptoms, nor the pathologic anatomy, nor yet the urinary chemistry are those of pure starvation. Starvation is not marked by persistent vomiting, pruritus, salivation, jaundice, maniacal delirium, or a fatal course in ten days to two weeks. The organs in starvation show simple atrophy of liver cords, granular degeneration, and focal necrosis (the work of Schulz[40] on fasting dogs, and Bianchi[41] with rabbits and mice), not the extensive degeneration seen in the toxemia of pregnancy. The urinary signs of starvation and toxemia may be similar, but the clinical significance of these signs is entirely different. The high ammonia in the urine of fasters means the consumption of tissue proteins and fats, in the absence of carbohydrates. In toxemia this ammonia ratio indicates that the patient is incapable of digesting, absorbing, and probably of burning the proteins, fats and carbohydrates consumed."

The high rest nitrogen he has found a very significant feature of the urinary change in toxemia. Though the increase may be missing when the ammonia is high, it is often the only noticeable change. In many cases when the patient became free from symptoms, the high undetermined nitrogen dropped to a comparatively low figure. The validity of the assumption that Folin's[42] variations are those occurring in health, Ewing believes may be questioned. He and Wolf have noted that with an individual on a mixed diet, when the rest nitrogen reaches 1 gm., or 10 to 15 per cent., certain symptoms followed.

Regarding the high ammonia, in a personal communication, Williams says:

There is no doubt that in a certain number of cases, inanition alone will cause a marked rise in the ammonia coefficient, but I do not consider that this is always the case. I know of several in my own experience, where the ammonia coefficient began to fall immediately after the termination of pregnancy, even though starvation continued for several days longer. On the other hand, the significance of ammonia is not so clear. I have recently seen several cases with recovery in which the coefficient had reached 20 per cent. I therefore am inclined to regard it more as a danger-signal than as an indication for immediate interference. If the symptoms do not promptly improve under treatment I consider that it offers a definite indication for the termination of pregnancy.

INDICATION FOR TERMINATION OF PREGNANCY

When little or no food has been taken, as in vomiting of pregnancy, it is impossible that starvation is not a factor. The carbohydrate supply is withdrawn, the fats and tissue proteins utilized, and a certain amount of the ammonia in the urine is due to combination with acetone bodies which have developed.

Underhill and Rand, and others, have tried dextrose solution by bowel with the idea of eliminating the part played by starvation. In this experiment certain patients have improved, while in others, in spite of dextrose, the toxemia and ammonia have increased. Theoretically, provided the sugar is absorbed, the ammonia due to acetone bodies should be overcome, and the high ammonia, which remains, must have its origin from some other source. While it is suggested that combination with other acids (lactic acid, Underhill and Rand) may cause the high ammonia, there is little evidence for this assumption. The conclusion follows that this persistent high ammonia is due to the diminished urea-forming function of the liver. It seems justified, therefore, in the present state of our knowledge, when high ammonia persists, in spite of dextrose solution by bowel, to use this test as an indication for the termination of pregnancy.

Falk and Hesky[43] have shown that in pregnancy the ureagenic and glycogenic functions seem to run parallel. With evidence of perversion of proteid metabolism levulosuria is easily produced. In several cases of toxic hyperemesis, Lequeux[44] has tested the assimilation for sugar and found it materially lowered. Because it parallels the general condition so closely, he is convinced that the glycogenic power is the most reliable index of the hepatic condition. The patient is given from 20 to 50 gm. of cane-sugar and his experience has shown that when the power of assimilation is below 1 gm. per kilogram of body weight, the prognosis is grave and the pregnancy should be terminated at once.

The evidence of impaired glycogenic function, then, is further proof of the measure of liver destruction and, together with the high ammonia test, seems to constitute a fairly sound indication for obstetric interference.

RELATION OF PERNICIOUS VOMITING, ACUTE YELLOW ATROPHY AND ECLAMPSIA TO ONE ANOTHER

Though there are certain differences, that acute yellow atrophy and pernicious vomiting are manifestations of a similar toxic process is a logical conclusion. They arise under similar conditions, in pregnancy, pursue much the same course, the anatomic lesions are similar, and the chemistry of the urine in the two is practically identical. Ewing states that intermediate cases, between the typical forms, both clinical and anatomic, are occasionally observed. He suggests that the more widespread complete liver destruction in acute yellow atrophy may be explained by the solvent action of extravasated bile and that polycholia from some specific form of intestinal putrefaction may cause the more intense jaundice.

One is not so easily persuaded, however, that pernicious vomiting and eclampsia are closely related toxic conditions. Clinically, hyperemesis is associated with a toxin of emetic properties, shows hypotension, occurs almost always in the early months, and is rarely accompanied by convulsions. Eclampsia, on the other hand, shows hypertension, with rare exception occurs late in pregnancy, and is practically always attended by convulsions.

No specific poison has been isolated in either disease, and as identical symptoms may occur with different pathologic conditions, our opinion must be based on histologic differences, and the chemical examination of the urine. Since Jürgens,[45] and later Schmorl,[46] described the liver in eclampsia, the picture has been considered pathognomonic of the disease, and as yet we know of nothing else which produces it. The lesion is essentially a thrombosis of the capillaries, with hemorrhages, and degeneration of the cells at the periphery of the lobule. In pernicious vomiting, the pathology is a fatty degeneration and necrosis of the cells at the center, extending toward the periphery. Based on the work of Opie,[47] call-

40. Schulz: Arch. f. d. ges. Physiol., 1899, lxxvi, 379.
41. Bianchi: Leber- und Nierenzellen wahrend d. Verhungerung, Frankfurter, Ztschr. f. Path., 1909, iii, 723.
42. Folin: Laws Governing the Chemical Composition of the Urine, Am. Jour. Physiol., xiii, No. 1, p. 66.
43. Falk and Hesky: Ztschr. f. klin. Med., 1910, lxxi, 261.
44. Lequeux: Recherches sur le pouvoir glycolytique chez la femme enceinte de vomissements incoercibles, Obstétrique, May, III, New Series No. 5, pp. 35-560.
45. Jürgens: Fettemboli u. Metastase von Leberzellen bei Eklampsie, etc., Berl. klin. Wchnschr., 1886, xxiii, 519.
46. Schmorl: Path. anat. Untersuchungen über Puerperal-Eklampsie, Leipzig, 1893; Zur Lehre von der Eklampsie, Arch. f. Gynäk., 1902, lxv, 504.
47. Opie: Zonal Necrosis of the Liver, Jour. Med. Research, 1904, xii, 147.

ing attention to the importance of zonal necrosis of the liver lobule, the histologic pictures are distinctly different, and dependent on separate changes for their origin.

Ewing has recently emphasized that eclampsia is not to be separated because of its peculiar hepatitis, and states the typical eclamptic liver is found only in rapidly fatal cases, and if the condition is prolonged, convulsions not pronounced, and jaundice is not present, that one is apt to find the hepatic lesion indistinguishable from that seen in some cases, which because of the absence of convulsions has been called acute yellow atrophy.

Here it seems, too much dependence has been placed on the appearance or non-appearance of a common symptom. Convulsions do occur in pernicious vomiting, and eclampsia without convulsions is a recognized condition (Esch,[48] Slemons[49]).

Dienst[50] believes that eclampsia is dependent on a combination of liver and kidney damage. But there is not infrequently degeneration of the renal epithelium in pernicious vomiting, and while in practically every case the kidney is injured in eclampsia, Olshausen,[51] Lusbarsch,[52] Goldberg,[53] Hughes and Carter,[54] and Schmorl have reported cases in which there was no demonstrable nephritis.

The examination of the urine rarely reveals albumin, casts and blood until the terminal stage of pernicious vomiting, while in preeclamptic toxemia, often, one of the first evidences of trouble is the appearance of albumin. The urinary nitrogen is quite similar in the two conditions, the nitrogen is low, especially in eclampsia, the urea decreased and the amino-acid, as observed by Ewing and Wolf, increased in both. Zweifel[55] has shown that the ammonia is high in eclampsia during the convulsions, but only for a short time following. The high ammonia coefficient usually present throughout the course of vomiting is of bad prognostic significance, while in eclampsia Williams[56] considers it a good sign.

In regard to the possible relationship between eclampsia and pernicious vomiting, Schmorl, Winter, Williams and others, on the basis of different liver lesions, hold they are entirely distinct processes. In direct contradiction to this opinion, Ewing, Dienst, Hofbauer, Strauss and many others explain away the zonal distribution of the liver lesions and maintain that there is but one toxemia of pregnancy.

Since the observations of Freund,[57] in 1882, and Lange,[58] in 1893, it has been generally acknowledged that there is a hypersecretion of the thyroid gland during pregnancy. The relation existing between the thyroid and metabolism led Nicholson[59] to believe that eclampsia might be due to thyroid insufficiency. Lately, Ward,[60] Foulkrod[61] and others have reported cases to substantiate further the relation of the thyroid and the toxemias.

A similar function has been ascribed to the parathyroid. Since 1906, Silvestri[62] has held the opinion, based on clinical and experimental evidence, that convulsions in general are due to hypocalcification of the brain, possibly due to hypoparathyroidism. Quest[63] has demonstrated a loss of lime during the last days of pregnancy, and in view of the observations along these lines it is possible that eclampsia and hyperemesis are accompanied by derangement of the glands of internal secretion, and it is their influence which explains the differences in the two conditions.

CONCLUSIONS

The characteristic vomiting of pregnancy, moderate or severe, is probably always of autotoxic origin. There is abundant evidence of the relation of certain glands of internal secretion (thyroid, parathyroid, adrenal) to the toxemias. The liver lesion alone does not explain the urinary picture, while metabolic studies on the influence of the thyroid and parathyroid glands, show analogies to explain the urinary changes. The importance of the neurotic element may be explained by the nervous influence on glandular activity.

On the assumption that the high ammonia nitrogen, after thorough administration of dextrose by enemata, is an indication of insufficient ureagenic function, it is urged that this test be given a trial in determining the indication for obstetric interference. To further substantiate the evidence of liver destruction, the glycogenic function may be determined by the experimental production of alimentary glycosuria using definite quantities of sugar.

The clinical picture and liver lesion are against the probability of eclampsia and pernicious vomiting being one toxic process. Whether the differences are to be explained by such additional factors as kidney involvement, loss of calcium or differences in the perversion of metabolism by glandular influences, remain to be proved.

When operative interference is indicated in the toxemias of pregnancy, chloroform is contra-indicated. The liver destruction following its use is heaping insult on injury. In view of the evidence of the relation of the thyroid, parathyroid and adrenal glands to the toxemias, a complete therapeutic trial of their extracts is urged.

ABSTRACT OF DISCUSSION

DR. JOHN OSBORN POLAK, Brooklyn: It is unfortunate that there has been any suggestion of the neurotic vomiting of pregnancy. In my experience the condition is either reflex or toxic. All of these so-called neurotic cases are mildly toxic, or suffer from an auto-intoxication rather than on account of an actual neurotic element. A strong neurotic element augments these conditions. The reflex conditions that we have found prominent factors in the vomiting of pregnancy are overdistention of the uterus and retroversion. In the undeveloped uterus, pregnant for the first time, with marked anteflexion, the woman will vomit and frequently abort. The next pregnancy will proceed without pernicious vomiting. Many of us are apt to let these toxic cases go too far. With the tests which Dr. Ingraham has given we should be in position to determine on a definite course of treatment in a week or ten days. It has been our rule to put these patients to bed, watch them, feed them with saline or sugar solution, lavage the stomach and note the urinary output and the hepatic output. If the vomiting persists after there is a total withholding of everything from the stomach and we find we have an increased nitrogen-coefficient, labor should be induced. I have seen two cases end fatally from unskilled inductions. These

48. Esch: Centralbl. f. Gynäk., 1906, xxx, 295-9.
49. Slemons: Bull. Johns Hopkins Hosp., 1907, xviii, 448.
50. Dienst: Pathogenese der Eclampsia, Arch. f. Gynäk., 1908, lxxxvi, 314.
51. Olshausen: Ueber Eklampsie, Samml. klin. Vortr. (Volkmann's), 1891, new series No. 39.
52. Lusbarsch: Die Puerperal-Eklampsie, Ergebn. d. allg. Path. u. path. Anat., 1896, i, 113-134.
53. Goldberg: Beitrag. zur. Eklampsie auf Grund von 81 Fällen, Arch. f. Gynäk., 1891, xli, 295; 1892, xlii, 87.
54. Hughes and Carter: A Clinical Experimental Study of Uremia, Am. Jour. Med. Sc., 1894, cviii, 177, 265.
55. Zweifel: Zur Aufklarung der Eclampsie, Arch. f. Gynäk., 1904, lxii, 1; lxvi, 536.
56. Williams: Text-Book of Obstetrics, 1909, p. 530.
57. Freund: Inaug. Dissert. Strasburg, 1882; Deutsch. Ztschr. f. Chir., Leipsic, 1883, xviii, 213; Centralbl. f. Gynäk., No. 32, 1898.
58. Lange: Ztschr. f. Geburtsh. u. Gynäk., 1893, xi, 34.
59. Nicholson: Case of Puerperal Eclampsia Treated by Large Doses of Thyroid Extract, Jour. Obst. and Gynec. Brit. Emp., 1904, v, 32-37.
60. Ward: Surg., Gynec. and Obst., 1909, ix, 617.
61. Foulkrod: Am. Jour. Med. Sc., 1908, cxvi, 541.
62. Silvestri: Gazz. d. Osp., Aug. 12, 1906, and May 31, 1910.
63. Quest: Quoted by Silvestri.

cases are toxic and chloroform should not be used. Furthermore, the toxemia renders the patient liable to sepsis and unless this procedure is carried out promptly and properly results are unsatisfactory. I have laid down a rule in these cases, that before the eighth week these wombs should be emptied with curet and forceps after a preliminary treatment to soften and shorten the cervix and render the evacuation easy. After the third month the best procedure is to make an incision of the anterior lip of the cervix and empty the uterus by the so-called vaginal Cesarean section. The more quickly we can empty this uterus, with the least trauma and by the correct surgical method, without leaving parts of the embryo within, the safer the patient is.

Dr. T. Mitchell Burns, Denver: I have not had a very large experience with pernicious nausea and vomiting and recall only one case in which I had to induce abortion. In this case there was acute anteflexion. In all the other cases I have never failed to cure by prohibiting anything by the mouth—particularly water—and feeding by the bowel. Because of this I believe there is always a marked neurotic element present. It may not be the only cause but one can cure most of the patients by suggestion of some form or other.

Dr. C. Jeff. Miller, New Orleans: I have known gastric lavage to relieve almost instantly in some of the neurotic cases and have also found it extremely beneficial in some cases which showed unquestionable toxic features.

Dr. Walter T. Hasler, Lehi, Utah: There has been a question in my mind as to whether possibly the condition may come on as the result of extreme hunger—a toxic condition from that cause. I have had a few cases in which as the nausea persisted the patients continued to go without eating, so that the vomiting increased with the degree of hunger. When I insisted on the patients taking food at frequent intervals the vomiting ceased.

Dr. C. B. Darling, Boston: In view of what has been said in regard to the stomach-tube, it may be interesting to mention a case I had some years ago in which all sorts of things were tried for the vomiting which had persisted up to nearly the fourth month. Finally, the patient herself caught on to the scheme of drinking water when she got up in the mornings, sometimes two, eight or ten glassfuls of water until she vomited the whole mass. She was then without nausea during the rest of the day. She carried the pregnancy through with this copious autolavage.

Dr. F. T. Andrews, Chicago: I had a patient who had been in such a condition with three previous pregnancies that induced abortions had been necessary and were done before I saw the patient. She came to me to care for her in her fourth pregnancy. I was young and thought I could do it and finally I fell on this plan. I knew that women who went to Europe or other places on steamships took various remedies for seasickness and got on very well. I therefore had two of these remedies analyzed and found that they contained bromids and antipyrin. I prescribed these drugs and the patient went along very well. Instead of being confined to her bed as previously, she was up and about. Later on she developed large bromid ulcers. I told her those would clear up. I afterward learned that at the end of the eighth month she had given birth to an anencephalic monster. There had been an inflammation of the amnion due to the bromid and this was the result. I gave no more bromid.

Dr. G. R. Neff, Farmington, Iowa: In a case I once had in which the patient was reduced almost to a skeleton, and in which I had tried all the known remedies, I found salted almonds and salted peanuts taken occasionally enabled the stomach to retain food.

Dr. Edwin O. Palmer, Los Angeles: I recall a case I had a year ago of nausea and vomiting in the third or fourth month. After using all the usual methods in meeting the condition, including the three routes of elimination, and having emptied the uterus, the nausea continuing in spite of rectal feeding, a consultant advised the use of thin shaved bacon, fried crisp. This was the first food retained by the stomach and no further vomiting occurred.

Dr. J. L. Lamb, Watts, Cal.: About two months ago I had a case similar to the one just mentioned. There were symptoms of toxemia but the neurotic element was especially marked. I tried everything that I ever heard of or read, including "crisp fried sliced bacon," just recommended, and salted peanuts. Everything failing, I called a physician from Los Angeles in consultation, who advised producing an abortion, which was done, but the neurotic condition continued, with vomiting and stomach trouble, for a month or six weeks before recovery, due, as I believe, to a hysterical neurosis.

Dr. C. B. Ingraham, Denver: In regard to Dr. Polak's suggestion, that there is a reflex vomiting, I think there can be no doubt. Yet we have many retroversions in which there is no nausea and even twin pregnancies and hydramnios without pernicious vomiting. The neurotic element, while not a distinct cause, I think is an important adjunct. I would like to believe that pernicious vomiting is due to a derangement of hormonic equilibrium. While ideas are too vague to be in any way positive, there are many factors pointing to this possibility. Silvestri has relieved symptoms of hypoparathyroidism by extirpation of the ovaries. During pregnancy the hypertrophy of the ovary and presence of corpus luteum cells is evidence of stimulation from the fetal tissue. If the internal secretion from the corpus luteum is a depressor of parathyroid function, and the placenta (which from its structure must be considered an organ of internal secretion) can be shown to be a stimulator of ovarian secretion, this interrelation would be of great significance in pernicious vomiting of pregnancy.

CACODYLATE OF SODA IN THE TREATMENT OF RECURRING ERYTHEMA MULTIFORME (ERYTHEMA PERSTANS)

REPORT OF A CASE

WILLIAM CUTHBERTSON, M.D.
CHICAGO

Patient.—Miss P., a young woman aged 27, with good family history, presented herself suffering from recurring erythema multiforme which had afflicted her since childhood. It reappeared every year, reaching its greatest intensity during August and September, and then almost disappeared during the winter. The disease started with papules scattered over various portions of the body, being worse on the arms and legs, next on the buttocks, and lastly on the trunk. These papules would rapidly form vesicles and bullæ, then, breaking down, would coalesce in large patches, leaving a moist, ulcerated surface, which would finally dry up, leaving a brown stain. This process was accompanied by a most intense itching and burning, disturbing the sleep and impairing the general health.

Treatment and Course.—When I first saw her, Aug. 5, 1911, she had a small papular eruption on the arms, principally, with a few scattered spots over the body generally. I gave her an intramuscular injection of ¾ gr. of cacodylate of soda (P. D. & Co.'s ampoule), and told her to report on August 7, when she received another injection. As she lived about 30 miles from Chicago, she could come in only twice a week to receive treatment. She kept this up until Sept. 30, 1911, since which time she has had no further trouble. She went through her two worst months without any serious outbreak. On two occasions during September she missed her appointment by three days on one occasion and four on another. At both these times when she came to the office the eruption had reached the vesicular stage once and the bullous stage the second time. An injection immediately arrested the eruption, and it disappeared. She stated she had never been so free from the trouble since it first started as she had been since being under treatment, and that during the two worst months of her disease.

In view of the futile efforts at treatment hitherto accorded this skin lesion, it would seem that in cacodylate of soda we may have a valuable therapeutic agent. The arsenic acts essentially on the epidermal structures;

and whether the etiology of erythema multiforme lies in a trophic disturbance or some toxic irritation, the physiologic action of the cacodylate of soda remains the same.

From the failure of Fowler's solution of arsenic to affect the lesion favorably, and the success of the arsenic treatment in the form of cacodylate of soda injected intramuscularly, it would be reasonable to suppose that Fowler's solution undergoes some chemical change in the stomach, while the cacodylate is absorbed directly into the blood-current.

I received a letter from the patient on Oct. 30, 1911, saying that she was still free from the eruption.

From my experience in this case I would commend cacodylate of soda for trial in all cases of erythema, more especially of the angioneurotic type.

122 South Michigan Boulevard.

OBSTETRIC EXPERIENCES AMONG THE AMERICAN INDIANS

F. SHOEMAKER, M.D.
Special Physician, U. S. Indian Service
DENVER

V. 58
1912

The generally accepted opinion that obstetrics among the American Indian women is always a simple matter is, I think, hardly a true conception of the subject, as shown by the several cases cited below. The majority of labors are, of course, conducted without trained medical care, but the women nearly always have the assistance of native midwives, and it is now growing daily more common for them to call on the nearest white physician for aid.

I have prepared brief notes on a few cases which have come under my observation during a residence of several years among the Indians of southwestern Oklahoma, and which may prove of interest.

CASE 1.—A primipara, aged 16, only a short time out of one of the government schools on the reservation, was attended by an old woman who enjoyed an enviable reputation among her people as a midwife. The patient came under my care a few days after she had been relieved of a dead fetus and presented a pitiable condition. The placenta remained within the uterus, a putrid, decomposing mass; there was a rise in temperature, a burn of the third degree covered almost the whole of the abdomen, an area 8 or 10 inches in diameter; this had been produced by a hot, flat stone placed there by the midwife in the hope of stimulating uterine contractions. The perineum was somewhat torn, though not badly, and there was also a urethrovaginal fistula, through which the urine constantly dribbled and kept up a foul, urinous odor. After the uterus had been emptied and washed out, the patient was removed to the hospital at the Fort Sill Military Post, where, with the assistance of Assistant Surgeon Cloud, she was operated on for the urethrovaginal fistula. The first operation not proving a complete success, a second one was performed at a later date. The patient remained under my care for several weeks, the incontinence and abdominal burn both proving to be very persistent and troublesome, but finally made a complete recovery and has since borne children.

CASE 2.—The patient was a young woman, the mother of three children, fairly well educated and the wife of one of the most prominent and enlightened of the younger members of the Kiowa tribe. Her case appeared to be progressing normally when, about the end of the seventh month, I was hurriedly sent for; she was about to be confined. Her labor lasted several hours, when she was delivered of a fetus that appeared to have been dead for some time. The most interesting feature of this case was the condition of the placenta, which was much atrophied, small, quite hard and on section was found to be granular and of a whitish color. It had undoubtedly undergone calcareous degeneration, which, I find, on referring to the literature, is rather an uncommon condition. There were no evidences of either syphilis or tuberculosis.

CASE 3.—A full-blood Indian woman was brought to my office from a long distance in the country on the third day after her confinement. On arrival she had a temperature of 105 F. and appeared very ill. After a rest she was brought to my office and prepared for operation. The uterus was carefully and thoroughly evacuated of its contents by means of a rather large, dull curet, followed by a thorough irrigation with sterile normal salt solution. Her temperature came down promptly after this, showing it to be a case of localized infection only. She was kept under observation for several days, the case soon ending in complete recovery. This woman was confined without medical care and surrounded, no doubt, by the most insanitary conditions possible for such cases, which resulted in a severe infection. The case is somewhat unusual on account of the curettement, without accident, so early post partum.

CASE 4.—This case was one of multiple pregnancy. The patient, also a full-blood Indian woman, was quite well advanced in age and the mother of several children. I was not called until she had been in labor four days. When I arrived, which was early in the day, I found the patient kneeling on the floor of her tent (it having been erected for the occasion near her house) with her hands grasping an upright pole in front of her that had been driven securely into the ground and fastened to the top of the tent. On examination I found one of the heads presenting within reach of the examining finger. She was given several rather large doses of quinin sulphate at regular intervals, and strychnin hypodermically, and by afternoon she was delivered of two healthy though somewhat undersized babies. She passed through her puerperium successfully. This woman seemed to be unable to complete her labor without assistance.

I might mention other cases of a similar nature, but those above recorded will suffice to show that the Indian woman, like her white sister, is frequently subject to serious accidents and complications attending the function of parturition.

ANEURYSM OF THE PALMAR ARCH

DAVID B. ROBINSON, M.D.
KANSAS CITY, MO.

The following case may prove to be of interest because of its extreme rarity. In looking up the literature on the subject, as far as I have been able to find, there are no similar cases on record.

History.—T. D., a switchman, aged 35, entered the Swedish Hospital, Sept. 2, 1911, complaining of dull pain in the palm of the hand, which was increased by pressure and radiated toward the fingers. His past history was negative, with the exception of a possible history of syphilis fifteen years previously. He had always been in railroad employ since he was 14 years of age, but had trained for prize-fights on the side, and had been in several professional fights.

In May, 1911, he hit the angle cock of an air hose, while trying to shut it off, with the palm of his right hand. His hand pained him considerably at this time, and the pain continued off and on for several months. In June, one month later, he noticed that a small tumor had developed in the palm of the hand; it could be moved very easily and throbbed after extra exertion. This tumor continued to enlarge for the next few months, until it was the size of a hickory-nut. His hand would be swollen after a day's work and the pain steadily increased. An examination showed a small tumor lying deep in the palm of the hand. No pulsation was perceptible.

Operation.—Sept. 2, 1911, the patient was given ether and a tourniquet applied at the wrist. A curved linear incision was made in the palm of the hand and the small tumor was found at the center of the deep palmar arch. On loosening up the tourniquet the tumor could be seen to pulsate plainly, and to increase to more than twice its size in the collapsed state. It was an aneurysm with a small pedicle, which was easily ligated, and the whole sac removed.

The patient made an uneventful recovery, and now has no difficulty at all in using this hand.

A NEW TONSIL HOOK

L. F. LONG, M.D.
ZANESVILLE, O.

I have devised a new tonsil hook which seems to me an improvement over any that I have used. Its advantages are the following:

A snare can be slipped on or off the tonsil without changing the hold on the tonsil after the hook is once placed.

New tonsil hook.

The hook, once placed, will stay in place and not drop out when pressure is relaxed, as the slight thickening on the lower two-thirds of the inner surface of the prongs holds it in place.

601 Market Street.

KNEE-JOINT AMPUTATIONS

REPORT OF A NEW METHOD

CHARLES EATON PHILLIPS, M.D.
ANCON, CANAL ZONE

To overcome the disadvantages of the thigh amputation, and to combine the good points and disadvantages of disarticulation with those of the osteoplastic operation, I have devised the following operation:

An oval anterior and posterior flap are turned up, the former line of incision extending from the lower portion of the internal condyle downward, and anterior as far as the tuberosity of the tibia. The patella tendon is cut without dissecting the skin from the patella and also leaving a portion of the patella tendon attached to the patella. The posterior flap is cut off approximately equal length or a little longer, if possible. The hamstring muscles are cut long. Disarticulation is then completed by cutting the remaining structures. Vessels are ligated, nerves pulled down and cut short, and allowed to retract.

The anterior flap is next turned up and the posterior surface of the patella sawed off. This is easily done by grasping the patella tendon by a pair of strong holding forceps when the patella can be sawed without difficulty, care being taken to remove as small a part of the patella as possible, so as to preserve nearly its original thickness.

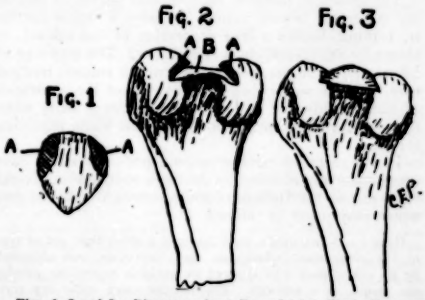
Next, a small piece is sawed off each side (Fig. 1 A A) in such a manner as will leave the patella narrower toward the upper end, or quadriceps attachment, and also narrowed toward the anterior surface.

If it has been possible to preserve sufficient skin flaps to cover the stump, the next step is to saw into each side of the intercondyloid notch (Fig. 2 A A) in such a manner that, when the piece of bone has been removed by means of a mallet and chisel (Fig. 2 B), there is left a depression, or modified intercondyloid notch, which is broader at the bottom and also toward the popliteal space, or, in other words, narrower at the end of the bone and also toward the anterior surface. The bevel of the notch is made to conform as nearly as possible to the bevel of the patella, but as there is of necessity a slight error, our aim should be to make the bevel of the patella greater, or that of the notch less, so as to insure good apposition when the patella is fitted into position.

The patella is next grasped by a pair of strong bone-holding forceps and drawn down forcibly until it slips into the place prepared for it and dovetails into it (Fig. 3). The greater the muscular pull, the more firmly it holds its place.

Next, the hamstring muscles are sutured to the patella tendon. The skin is sutured, a small drain inserted and the leg put up in dressing. It will be found that the forcible drawing down of the patella brings the line of skin suture well to the popliteal space and away from all pressure.

If, however, it is impossible or inexpedient to save enough skin to cover the stump without too great tension—and this can be determined by grasping and drawing



Figs. 1, 2 and 3.—Diagrams of patella and joint, illustrating new method of knee-joint amputation.

the patella down before anything has been done toward preparing the notch—equally good results may be obtained by sawing through the condyles and then cutting out a notch in the sawn condyles so that the patella will dovetail into it as before. Nearly 2 inches may be gained in this way without sacrificing any of the advantages of the operation.

In either case we get a stump that is very satisfactory. The patella forms the center of it, and laterally the two condyles share their portion of the weight in such a manner that the normal distribution of weight, as in the flexed knee, is preserved.

The large bearing surface formed by the tough skin taken from the anterior aspect of the knee is able to take the full weight of the body without abrasion or discomfort.

Another advantage, which it shares in common with disarticulation, or amputations below the knee, is the enlargement furnished by the condyles, or even portions of the condyles. With the enlargement, an artificial leg can be adjusted so that it will not slip up and down when walking or sitting.

Still another advantage which this operation possesses is the short flap which is sufficient to cover the stump;

this gain is made by forcibly drawing down the patella, bringing with it the skin fascia and muscles, which, if allowed to retract, would fail to cover a stump several inches shorter.

A representative of one of the largest artificial limb manufactories in the country remarked, after careful examination of one of these amputations, that the stump was ideal for the fitting and wearing of an artificial leg, and that it was by far the best end-bearing stump he had ever seen, and urged its adoption in suitable cases, from a prosthetic standpoint.

The operation is not at all difficult and requires very little additional time. The first time I ever attempted the operation it took about a half hour with closure and dressing.

The limits of usefulness of this operation, as with any, are narrow. No one would sacrifice 1½ or 2 inches of tibia needlessly, but where it is impossible to save the knee, by this amputation all the benefits of a knee-bearing stump may be preserved.

Ancon Hospital.

CASE OF INTUSSUSCEPTION COMPLICATED BY VOLVULUS

C. S. LAWRENCE, M.D.
WINSTON-SALEM, N. C.

A careful search of the literature at my command has failed to reveal a case of intestinal obstruction in which the symptoms and pathologic findings coincide with the following case:

Aug. 21, 1911, I first saw Mr. B., white, aged 22, laborer. Family history was negative. Patient had had usual diseases of childhood. He had had attacks of severe pains in abdomen with nausea and vomiting at intervals of from one to six months for the past six years. Four years ago his appendix was removed, but this gave him no relief, and one of his attacks came on a few days after the operation. For the past six months these attacks have increased in frequency and severity.

Present Illness.—About 9 a. m. Aug. 20, 1911, while at breakfast, he was taken with one of his usual attacks of abdominal pain, he did not eat much breakfast, thinking the pain would pass off, as usual, but it grew worse. He became nauseated and vomited. A physician was called and gave morphin to relieve the pain, but it failed; chloroform was given, but as soon as the effect of the chloroform would wear off, the pain would come on again with great severity. An enema of soap and water was given with no result. The pain, vomiting and constipation continued all that day and the next until 10 p. m., when I saw him in consultation with Dr. V. M. Long. His condition was as follows: He was lying in bed, on his right side, thighs flexed on abdomen, anxious facial expression, pulse 110, temperature 101 F.; abdomen rigid, slightly distended in upper part. On palpation a mass could be felt below and slightly to the left of the umbilicus. On rectal examination the mass could be felt at the brim of the pelvis, but it was not in the rectum. The patient had had large quantities of castor oil during the day, and an enema in the evening, which was returned with a large quantity of blood, but no fecal matter or flatus. The patient had also vomited a dark fluid, which the father said smelled bad. He had voided a small amount of urine before I saw him.

Treatment.—Operation was decided on at once. Under ether anesthesia a median incision about three inches long, between the umbilicus and symphysis, was made. On opening the peritoneal cavity a large quantity of seropurulent fluid escaped. On passing the finger down to the brim of the pelvis a mass could be felt attached by what seemed to be a hard cord, the mass hanging over the pelvic brim. There were a few soft adhesions which were separated with the finger, and the mass delivered, together with several coils of distended ileum. On examination, the mass was found to be an iliac intussusception which had become twisted on its mesenteric axis. The involved intestine was very black, so that it was considered unsafe to leave it. The entire mass was resected and an end-to-end anastomosis made with the Murphy button, reinforced by silk Lembert sutures. Gauze drains were placed in the upper and lower ends of the incision. The patient left the table in about thirty minutes; pulse 160.

Postoperative History.—He received strychnin, gr. 1/20, and 700 c.c. normal salt solution under the skin while on the table. After being placed in bed morphin, gr. ¼, and atropin, gr. 1/150, was administered. One hour later the pulse was 140, respiration 34. The pulse gradually came down to 110 at 6 a. m., temperature 99 F. Both began to rise; morphin, gr. ¼, atropin, gr. 1/150, was given and proctolysis started. Patient passed gas. The stomach was distended and patient vomited a dark fluid. The stomach-tube was passed and a large quantity of gas and dark fluid mixed with oil was removed. The patient continued to improve from this time on, the stomach being washed at intervals of from six to eight hours for the first forty-eight hours. The bowels moved freely thirty-six hours after the operation. The patient voided urine freely and never had to be catheterized. Everything went smoothly until the fifth day when I dressed the wound and removed the drain from the upper part of the incision and placed in a fresh piece of gauze in a very small opening. In the afternoon the patient complained of pain in the abdomen and his temperature was found to be 103.2, pulse 120. On removal of the gauze a small quantity of purulent material was found. A small rubber tube was inserted and the temperature promptly returned to normal. When the dressings were removed from the abdominal wound sixteen days after operation they were completely saturated with a dark fluid, due to a fecal fistula discharging from the upper drainage tract. The small tube was removed; the fistula discharged profusely all day, but soon closed and by the third day there was not enough discharge to soil the dressing through more than four layers of gauze. On September 18 patient went home and was up and about the house; September 26 he passed the button. At present, September 28, he is about, looks well and feels well.

208 Masonic Temple.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

PROPAESIN—Propylis Aminobenzoas.—Propyl Aminobenzoate.—Paramidobenzoic Acid Propyl Ester.—Propaesin, $C_6H_4.NH_2COO(C_3H_7)$ 1:4, is the propyl ester of paraminobenzoic acid, $C_6H_4.NH_2COOH$,1:4.

Propaesin is prepared by esterification of paraminobenzoic acid with propyl alcohol.

Propaesin is a fine, white or colorless, odorless, nearly tasteless powder, which produces numbness when placed on the tongue. Propaesin is very slightly soluble in water and is not readily wetted by this solvent. It is soluble in alcohol, benzene, chloroform and ether. Propaesin melts at 73° C. (163.4° F.).

When heated on platinum foil Propaesin burns without leaving any ash; when heated with an excess of potassium hydroxide test solution it melts before boiling, forming an oily layer. By boiling this mixture the melted Propaesin is saponified with the formation of propyl alcohol, which may be recognized by its odor. A clear,

nearly colorless solution results, which, when neutralized with hydrochloric acid and cooled, gives a white precipitate of paraminobenzoic acid; the addition of a small quantity of ferric chloride test solution to the acidified solution gives a reddish brown color.

Actions and Uses.—Propaesin is a local anesthetic and analgesic, said to be stronger than ethyl aminobenzoate. It is astringent and is said to be practically non-toxic. It is said to be useful in the treatment of gastralgia, gastric ulcer and other painful diseases of the mouth, esophagus and stomach. Externally it is said to be useful to reduce the sensibility of the mucous membranes of the nose, ear and larynx and to produce local anesthesias. It is claimed to be of value in all painful wounds and ulcers of the mucous membranes and of the skin. It is said to be useful for relieving pain in dental operations.

Dosage.—0.25 to 0.5 Gm. (4 to 8 grains) per dose, 2 to 3 Gm. (30 to 45 grains) per day alone or mixed with sugar or other medicament or vehicle.

Externally it may be used in ointments of from 1 to 20 per cent.

Manufactured by Franz Fritsche & Co., Hamburg, Germany (Parmele Pharmacal Co., New York). U. S. patent. U. S. trademark No. 74,856.

LACTAMPOULE.—Lactampoule is a pure culture in ampoules, of the selected *Bacillus bulgaricus*, each ampoule containing about 12 Cc.

The bacilli are obtained by the usual bacteriologic method, the growth of the bacilli on modified Cohendy peptone-sugar-broth medium.

Actions and Uses.—Lactampoules are designed to afford a pure culture of the Bulgarian bacilli for the inoculation of milk or other culture medium, or for direct applicaton in the treatment of affections of the body cavities.

Dosage.—The ampoules must be kept in a cold place and are not guaranteed beyond the date stamped on the package.

Manufactured by Fairchild Bros. & Foster, New York. Not patented or trademarked.

BACILLARY MILK.—Bacillary milk is a sterilized fat-free milk fermented by the action of a pure culture of *Bacillus bulgaricus* containing over 2 per cent. of lactic acid.

Bacillary milk is said to contain the Bulgarian bacilli in pure culture and has the marked acidity characteristic of milk soured by the oriental milk-souring bacilli and is free from sliminess or bitterness. It is said that in a cold place it may be kept for a long time without impairment of its qualities.

Actions and Uses.—Bacillary milk is used as a means for the ingestion of the Bulgarian bacilli and for its lactic acid as well as for its nutritive value.

Dosage.—Where the acidity is distasteful the portion of the milk directed to be taken may be rendered palatable by mixture with milk or water or by addition of sugar. Bacillary milk is put up in glass bottles, each containing 1 pint and should be kept on ice.

Manufactured by Fairchild Bros. & Foster, New York. Not patented or trademarked.

DEXTRI-MALTOSE, Mead's.—Mead's Dextri-Maltose is said to contain approximately: maltose 52.0 per cent., dextrin 41.7 per cent., sodium chloride 2.0 per cent. and moisture 4.3 per cent.

It is prepared by the action of diastase on starch.

Mead's Dextri-Maltose is a pale yellowish-white, granular, odorless powder, having a faintly sweetish taste. It is somewhat deliquescent on exposure to the air. It is soluble in water.

If a few drops of iodine test solution be added to an aqueous solution of Mead's Dextri-Maltose (1 to 10) a reddish violet but not a blue color should be produced.

The maltose in Mead's Dextri-Maltose is determined by the Fehling volumetric method as described in Leach's "Food Inspection and Analysis," Ed. 2, p. 591.

Actions and Uses.—On the claim that maltose is more readily assimilated than other forms of sugar, Mead's Dextri-Maltose is proposed to supplement the carbohydrate deficiency of cows' milk. The nutritive value of 500 Gm. of dextri-maltose corresponds to approximately 1,850 calories. The same quantity of milk represents 360 calories.

Dosage.—It may be used in all milk mixtures in the same proportions—by weight—as sugar of milk—i. e., 1 ounce of Mead's Dextri-Maltose (2 tablespoonfuls) to a 20-ounce mixture.

Manufactured by Mead, Johnson & Co., Jersey City, N. J. Not patented or trademarked.

Therapeutics

PRESCRIPTION NONSENSE

The following criticisms are not intended to apply to a recent brief, but quite complete, paper on the treatment of gastric ulcer in which the prescriptions appeared. The general acceptance of the prescriptions of men of renown which were quoted by the author is, however, to be deplored. These prescriptions are neither advisable nor valuable. The same deplorable prescriptions were copied semi-editorially by another journal, the quotation not giving the valuable parts of the original paper.

The fact that a man is of great ability and of great reputation is no proof of his ability to write sensible prescriptions or to treat a disease or condition scientifically. Able practitioners are many times divided into two classes: those who are drug nihilists (and yet some of the worst mixtures are often used by them), and those who believe in the pharmacologic and chemical action of drugs and yet ridicule the art of good prescription-writing as beneath their dignity. Such men often write the most uncouth prescriptions and the most absurd combinations in order to get the desired action of one drug. There is a large number of practitioners who never analyze, but believe anything a man of renown says, and copy his prescriptions verbatim and repeatedly. Such prescriptions are perpetuated by authors, writers and editors. It is the object of this article to urge an analytical spirit of criticism of each and every prescription.

It is the educated physician who is driving the laity to seek drugless treatments to their frequently serious detriment and often hopeless neglect, because he will not endeavor to find a simple drug, administered in a pleasant manner that will help the patient's troublesome symptom without injuring some other part of him. Also, as the layman hates more and more to be "drugged," as he terms it, and dislikes multiple mixtures, and dislikes to pay for a large bottle of some proprietary mixture, he often neglects to seek scientific advice.

The following prescriptions are examples in point. Their authors are good men, some of them of world-wide reputation.

"To Reduce Acidity in Gastric Ulcers: Credited to Matthes of Cologne.

"℞	Gm. or c.c.	
Infusi radicis rhei	150	ʒ v
Sodii bicarbonatis	6	ʒ jss
Olei menthæ piperitæ	3	♏ xlv

Misce. S.: A teaspoonful twice daily."

Criticism.—1. An infusion of rhubarb root is too disagreeable to administer to anyone. In the next place, it could have no action whatsoever on gastric ulcer or gastric acidity. Its action is that of a bitter laxative.

2. Theoretically, oil of peppermint should not be administered in gastric ulcer, as the stimulation of a carminative can do nothing but cause the outpouring of more gastric juice, even if menthol directly applied to the ulcer might, in some instances, help it to heal.

3. The only object of this prescription, then, is the bicarbonate of soda, which would act chemically to temporarily diminish the gastric acidity, and might therefore stop pain.

4. It is utterly absurd to order such a prescription administered twice daily without specifying the time in relation to meals, to pain, or to any action of the bowels which might occur from the rhubarb.

Credited to Ewald

℞	Gm. or c.c.	
Magnesiæ ustæ		
Sodii carbonatis		
Potassii carbonatis, āā	5	gr. lxxv
Pulveris radicis rhei	10	3 ijss
Sacchari lactis	25	3 vi

Misce. S.: Half a teaspoonful every hour."

Criticism.—1. There is no difference of any importance in the action of sodium carbonate and potassium carbonate; therefore there is no object in using both.

2. Sodium carbonate is more or less irritant: sodium bicarbonate is hardly irritant at all. There is therefore no reason for using sodium carbonate in place of sodium bicarbonate.

3. Powdered rhubarb root is intensely disagreeable to take, and cannot help in reducing the acidity of gastric juice; in fact, any bitter will increase the outpouring of gastric juice. If a laxative is desired, it certainly should not be administered in this manner.

4. Any sugar, even sugar of milk, is better not given to a patient in whom one is attempting to reduce hyperacidity.

5. The only satisfactory action from this prescription must come from the heavy magnesia, but even its gentle alkaline action would be overcome by the combination in which it finds itself.

6. Half a teaspoonful of a powder containing rhubarb, administered every hour without a definite limit, certainly seems bad therapy.

The following three prescriptions are supposed not only to "reduce hyperacidity," but also "to relieve pyloric spasm":

Credited to Elsner

℞	Gm. or c.c.	
Extracti belladonnæ	1	gr. jss
Sodii bicarbonatis		
Magnesii phosphatis, āā	10	3 ijss

Misce. S.: A teaspoonful three times a day."

Criticism.—1. The extract of belladonna should be the extract of the leaves. The official extract is a sticky mass. Powdered extract of belladonna is kept in stock by druggists, and would be used in this prescription. The only action of the belladonna is that of the atropin, and the action of atropin is to dry up secretion and dull the ends of the peripheral nerves so as to stop spasm. If such an activity was desired, it seems better to give a definite dose of atropin, or a definite dose, alone, of tincture of belladonna, rather than to surround an active drug of this character (and, by the way, the extract of belladonna may not always be of standard strength) with other drugs that may not allow it to be absorbed or to act until it gets well down in the intestine, or, on the other hand, may be absorbed very rapidly. In other words, a drug that is a poison should be given in such a manner that each dose positively represents a definite quantity of the drug. The combination ordered above would make the dose in each teaspoonful very indefinite.

2. Magnesium phosphate is not official. Its activity is very doubtful. There seems to be no good reason for expecting it to do any good in hyperacidity. It is exceedingly rarely used as a drug.

3. Therefore, the best action of this prescription for hyperacidity is the sodium bicarbonate, and it is better to give it alone, or perhaps with magnesia, and the atropin or belladonna should be given separately, as suggested above.

Credited to Trousseau

℞	Gm. or c.c.	
Extracti belladonnæ		
Foliorum belladonnæ, āā	0.33	gr. v
Extracti gentianæ, q. s.		

Misce; Fiant pilulæ, No. xxx.

S.: One pill before breakfast. Increase slowly to five pills."

Criticism.—1. Extract of belladonna, which is made of belladonna leaves, and then belladonna leaves, made up into pill form, is almost too absurd to need discussion. As above stated, the action of belladonna is atropin, and if belladonna is indicated, either atropin, or tincture of belladonna, or a fluidextract of belladonna is much the better treatment.

2. Extract of gentian is used here only as a menstruum or excipient. There certainly is no sense in taking an official extract of a drug and using it as a simple excipient for a pill mass. In other words, there is no action from the gentian that is desired, and gentian would have no action in pill form under any circumstances. Therefore, some other excipient selected by the druggist and left to the druggist's decision is better than ordering extract of gentian.

3. The directions of "one pill before breakfast, and increase slowly to five pills" means that there is a desire to administer all of the atropin the patient will tolerate. It is so uncertain how much belladonna or how much atropin action will be obtained from the above pill that it is very careless prescribing. An active substance like belladonna should not be increased in dosage unless in a very soluble form.

Credited to Cohnheim

℞	Gm. or c.c.	
Tincturæ belladonnæ	5	gr. lxxv
Olei amygdalæ dulcis (olei amygdalæ expressi)	30	ʒ i
Vitellum ovi unius		
Aquam destillatam ad	200	ʒ vi, 3 v

Misce; Fiat emulsum.

S.: Two teaspoonfuls three times a day."

Criticism.—1. No active drug like belladonna should be administered in an emulsion. It is impossible to guarantee that each two teaspoonfuls, the dose, represents every other two teaspoonfuls throughout the mixture. As above stated, uncertain dosage of belladonna is inexcusable.

2. It is uncertain whether the author of this prescription desired to make an emulsion with the egg to administer the oil of sweet almonds, or whether he desired the two teaspoonfuls of egg stuff to give a raw egg treatment to the ulcer. At any rate, the oil of sweet almonds certainly is not a specific treatment for ulcer of the stomach, and the raw egg treatment of ulcer of the stomach is not furthered by this prescription.

3. The question might arise how long the yolk of this egg would remain fresh in this distilled water emulsion. In other words, this prescription is absolutely footless.

A SUGGESTION FOR HYPERACIDITY AND ULCER OF THE STOMACH

To further the objects aimed at by the above prescriptions atropin given alone, or tincture of belladonna given alone is good treatment.

To stop the pain of the ulcer and to overcome the hyperacidity temporarily, nothing is more simple or more effective than milk of magnesia (magma magnesiæ, N. F.), in one or two teaspoonful doses, administered in warm water.

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[For other information see second page following reading matter]

SATURDAY, JANUARY 6, 1911

THE CONSPIRACY OF SILENCE

One of the most powerful chapters in the Great American Fraud series was that entitled, "The 'Patent-Medicine' Conspiracy Against the Freedom of the Press,"[1] by Mr. Mark Sullivan. Therein it was shown that the twenty millions or more dollars spent annually by the "patent-medicine" manufacturers of the United States was expended not merely for what went into the newspapers as advertisements, but for what was kept out of the newspapers as news. Stated more baldly, the advertising contract was the price of silence. Nor was this a mere tacit understanding—a "gentlemen's agreement," so to speak—but a part of the advertising contract. As one contract read in part:

"It is agreed that the J. C. Ayer Co., may cancel this contract, pro rata, . . . in case any matter otherwise detrimental to the J. C. Ayer Co's. interests is permitted to appear in the reading columns or elsewhere, in this paper."

Would the death of a child due to an overdose of Ayer's Cherry Pectoral be reported in a newspaper that advertised this product? Would the public be warned of the dangers of certain headache remedies by those newspapers that carried advertisements of these deadly medicaments? Hardly. And so a "conspiracy of silence" was maintained and even to-day a large number of newspapers are still so recreant to their trust to the people as to eliminate from all their news any reference that may directly or indirectly injure their advertisers' business. Fortunately for the public a number of weekly and monthly lay magazines have been outspoken in their denunciation of the "patent-medicine" evil and have thrown the light of publicity in the dark places of charlatanry and quackery. Their lead has been followed by some of the more progressive and enlightened newspapers and the work of education goes forward.

So much for the lay press. Exactly the same conditions exist in medical journalism as have obtained in lay journalism. Not altogether the same either. Possibly because the sums of money involved are not as large or for some other reason, the "silence clause," as such, has not, we believe, been brought into use in making advertising contracts with medical journals. But so far as the actual working of the matter is concerned it might as well have been. For although the fraud and chicanery connected with the so-called ethical proprietary business have been repeatedly exposed, practically none[2] of the self-styled independent medical journals have given their readers any information regarding the matter. In the medical field, then, the conspiracy of silence has been just as effective as in the non-medical—and the injury to the public probably almost as great.

The attitude taken by proprietary manufacturers toward free and unrestrained discussion of scientific therapeutics was well illustrated in the protest of the M. J. Breitenbach Company to THE JOURNAL of the American Medical Association. Briefly, the facts were these: In December, 1904, the government of Porto Rico published a report of its "Commission for the Study and Treatment of Anemia in Porto Rico." This splendid scientific work was commented on editorially in THE JOURNAL, in the course of which the following statement, based on the findings of the Porto Rico commission, was made:

"The day of blind reliance on iron, quinin and tonics in general in the treatment of anemic conditions in tropical countries is past, never to return."

Surely a mild and conservative statement of scientific fact; but the M. J. Breitenbach Company thought otherwise. The company, which at that time was advertising its product, Pepto-Mangan, in THE JOURNAL, wrote as soon as the editorial just referred to appeared, protesting that the editorial sentiments were a direct slap at the company's product. The Breitenbach company further stated that it could not see any advantage in advertising in a journal that would editorially contradict the statements that appeared in its advertising pages. In a way, the company was right. It was inconsistent for THE JOURNAL, which was exposing mendacity, editorially, to accept the advertisement of a preparation that was sold under mendacious claims. This incident is recalled, however, merely to make evident the uselessness of expecting medical journals whose very existence — in some instances—practically depends on advertising contracts of proprietary manufacturers to tell the truth in their reading pages when such truth is against the interests of their advertisers.

The history of the propaganda against fraudulent proprietary medicines has proved the futility of expecting a free discussion of scientific therapeutics in any case in which proprietary interests are directly or indirectly involved. For example, the widely advertised Anasarcin was shown to be a secret nostrum of the insidious kind—one of those silly, simple mixtures—exploited under false and dangerous claims. These and

1. We have a few reprints of this chapter. As long as they last, one will be sent on receipt of a stamped addressed envelope.

2. An exception should be made in this connection to the *Medical World* of Philadelphia. While this journal advertises some preparations that are open to criticism, it has not hesitated to copy our reports even when, in some instances, they reflected on its own advertisements. It should also be said that this criticism does not apply to two other independent journals, the *Cleveland Medical Journal* and the *Southern Medical Journal*, which accept advertisements of only such proprietaries as have been approved by the Council on Pharmacy and Chemistry.

other damaging facts were detailed at some length in THE JOURNAL, but so far as we know not a single independent medical journal gave its readers the benefit of this information. The Anasarcin Company is a heavy advertiser!

Tyree's Antiseptic Powder was shown in THE JOURNAL to be essentially a mixture of zinc sulphate and boric acid, falsely labeled and sold under fraudulently mendacious claims. Was the medical profession given the benefit of this information by the medical press? No, indeed. Tyree advertised liberally and the medical journals were discreetly silent.

An examination of Campho-Phenique by the Council on Pharmacy and Chemistry showed that the product was sold under a fake formula and fraudulent claims and was marketed by a man who was making and selling such products as "Smith's Bile Beans," "Swain's All-Healing Ointment" and several other "patent medicines." Campho-Phenique was exposed in detail in THE JOURNAL—but the exposé was carefully ignored by the hundreds of medical journals that an over-trusting profession believes exist for its benefit. Campho-Phenique is advertised, and advertised extensively!

Phenalgin was long advertised (1) as a synthetic, (2) as requiring special skill in its preparation, (3) as having therapeutic values which it did not possess, and (4) as being non-toxic—four definite and inexcusable falsehoods. It was shown in THE JOURNAL to be a mere acetanilid mixture and the viciousness of its method of exploitation was more than once declared. Was this matter reprinted or abstracted in the so-called independent medical journals? Hardly; the makers of this headache cure spend many thousands in advertising!

Papine has long been sold to the medical profession as a peculiarly efficacious and valuable form of opium and as one that would not "create a habit." Examined by the Association's chemists it was reported to be morphin dissolved in a watery-alcoholic solution containing glycerin, flavored to imitate cherry and colored with cochineal. Did the medical press of the country enlighten its readers on this damnably vicious fraud? Not at all; were its half-page advertisements the price of silence?

Antikamnia, one of the most impudent frauds ever foisted on the medical profession, has been repeatedly exposed in THE JOURNAL. In this instance, the proposition was so rank, the fraud so evident, the deception so transparent that some of the more consistent journals threw out the Antikamnia advertisement. It is still carried, however, by more than fifty American medical journals, ranging from the New York *Medical Record* and the *Annals of Surgery* down. Naturally, the "conspiracy of silence" in favor of the Antikamnia fraud is still maintained.

And so we might go on, naming preparation after preparation that has been proved beyond the peradventure of a doubt to be fraudulent, worthless, dangerous, or all three, and against which the bulk of the medical press of this country has raised no protest, but, on the contrary has, by accepting their advertisements, tacitly endorsed and invested with the badge of presumed respectability. How much longer will the "conspiracy of silence" be maintained? Just so long as an easy-going profession tolerates medical journals whose owners are rendered aphasic by their advertising contracts.

POSITIVE WASSERMANN REACTION IN NON-SPECIFIC TUMORS OF THE CENTRAL NERVOUS SYSTEM

Recently several reports have appeared in the medical literature announcing positive Wassermann reactions in non-specific affections of the central nervous system, especially in tumors of the brain and cord.[1] Our present knowledge of the nature of the substances which interact in complement-deviation would seem to enable us, however, to find satisfactory explanations for these occurrences; hence the pathognomonic significance of the Wassermann reaction may not have to be questioned:

1. Extracts prepared from syphilitic livers may contain bacterial antigens as well as syphilitic, and the presence of the corresponding bacterial antibodies in the patient's serum may produce a positive reaction not due to syphilis. This factor is a source of error which applies not only to tumors of the central nervous system, but also and especially to neoplasms of the various organs and to tuberculosis, affections in which secondary infection plays so important a part.

2. The inhibition of hemolysis in non-specific affections is, almost always, incomplete. In many such cases a larger amount of amboceptor, three to five times the simple hemolyzing dose, will produce complete hemolysis, whereas the specific, control serum will not be influenced by this increase of hemolysin.

3. Whereas in general an alcoholic extract is permissible, in diseases of the central nervous system a specific watery extract is essential. There is no doubt that, besides the specific antigen-antibody mixture, a high amount of lipoids (cholesterin, lecithin, sahidin) contained in antigen and in serum may suffice to absorb the total quantity of complement. This fact explains the behavior of some icteric and chylous serums, which alone without the addition of antigen fix the complement and can therefore not be used for the Wassermann reaction with the usual technic. Since lipoids are insoluble in water but soluble in alcohol, the alcoholic extract differs vitally from the watery in its high content of lipoids, whereas the specific antigenetic substances are not readily soluble in alcohol. The lecithin content in the serum and cerebrospinal fluid of syphilitic, tabetic and paralytic patients is usually increased, which explains why in all affections of this nature a positive result is so frequently obtained.

1. See Newmark, THE JOURNAL, this issue, p. 11.

If now we consider the important rôle which the phosphatids play in the composition of nervous substances, it may be possible that also in other affections of the central nervous system, as disseminated sclerosis or tumor, an impoverishment of lipoids is brought about, in all the organs, especially in bone-marrow, which secondarily may lead to a lipoid accumulation in the blood-serum. By the summation of the lipoids contained, on the one hand in the antigen, and on the other in the serum, the complement may become absorbed. This error may be excluded by the use of a watery extract, for whereas the lipoid content in the serum alone will be insufficient to hinder hemolysis, which of course will be manifested by controlling the serum without addition of antigen, the addition of lipoids contained in the alcoholic extract may be sufficient to cause a complete inhibition of hemolysis.

Only after considering all these possibilities of error, and excluding them by the use of a technic answering these indications, are we justified in refuting the specificity of Wassermann's reaction.

ANOTHER INDUSTRIAL DISEASE: SHUTTLEMAKERS' DISEASE

The careful investigation of industrial diseases, regarding which some comment was offered in a recent number of THE JOURNAL,[1] has usually led to results that have been of direct value to science as well as to the workers involved. This has been conspicuously true in the study of a rather baffling ailment found among workmen engaged in the manufacture of shuttles, in Lancashire and Yorkshire, England. Numerous cases of illness among those handling the wood in these factories led to the belief that the timber used possessed a property injurious to health; and the impression went abroad that the sickness was due to some poison given off by the wood during the process of manufacture of the shuttles. The symptoms complained of were "headache, sleepiness, running at the nose and eyes, chronic sneezing, giddiness, faintness, loss of appetite, shortness of breath, nausea, etc." The patients exhibited a pale, yellowish or greenish color of the skin, accompanied by a peculiar "camphor" or "Turkey rhubarb" odor from the breath and skin. Deaths were reported as due to "cardiac asthma" and "cardiac incompetence."

An inquiry into the details of the industry developed the fact that various woods have been used for the manufacture of shuttles, namely, Persian box, persimmon, cornel, etc. These timbers have certain peculiarly suitable properties as cabinet woods and are capable of taking on a high polish, thus becoming especially suited for the purposes involved. It appears, however, that more recently certain other imported woods known under the names of West African boxwood, South African boxwood, West Indian boxwood, and East London boxwood have entered into use partly because of technical advantages, and in part because of comparative cheapness. They go through various processes of sawing, trimming and sandpapering, partly by machinery and partly by hand. The sickness was most prevalent among those men who were exposed to the fine smoke-like dust given off by the saws or lathes where the inhalation of the dust or absorption in other ways was almost unavoidable, especially as the men are lightly clad and often naked from the waist up.

At the instance of the professor of botany at the University of Liverpool, Mr. R. J. H. Gibson, an examination of the sawdust of supposedly toxic wood was made in the university laboratories.[2] As a result it has been shown that an alkaloid present in the "West African boxwood" is a cardiac poison, inducing experimentally a gradual slowing of the heart-beat, with a cumulative effect after long exposure to its influence. The alkaloid is very soluble and probably easily absorbed.

Further examination[3] disclosed the fact that the toxic wood variously termed West African or East London boxwood is not "boxwood," i. e., a species of *Buxus*, and not identical with the South African or West Indian boxwood. It is a native of the Congo basin and the Cameroons; and Professor Gibson has at length identified it as a species of *Gonioma* which belongs to a poisonous order of tropical or subtropical plants. Thus joint clinical, chemical, physiologic and botanical investigations have made the means of relief of a most objectionable industrial danger obvious.

OATMEAL IN DIABETES

Of the various dietetic types of treatment suggested for diabetes in recent years probably none has aroused an equal degree of interest or remained in vogue to the same extent as the oatmeal "cure" introduced by von Noorden. Essentially this consists in feeding daily a mixture of 250 grams of oatmeal, 100 grams of protein, preferably of vegetable source, and 300 grams of butter, prepared in the form of a soup or porridge, at frequent intervals, along with an occasional allowance of beverages—cognac, wine, or black coffee.[1]

Everyone acquainted with the history of the therapy of diabetes mellitus knows how warmly numerous drugs and procedures have been recommended and how disappointing these have generally been. Little reliance can be placed on any reports in which, as so often has been the case, the diet factors are imperfectly controlled; but aside from this, a marked temporary improvement and increased carbohydrate tolerance not infrequently follows the more careful attention to the details of diet and the habits of life; and the benefits are then falsely

1. THE JOURNAL A. M. A., Dec. 2, 1911, p. 1841.

2. Gibson: The Physiologic Properties of "West African Boxwood," Biochem. Jour., 1906, i, 39.

3. Gibson: Note on the Synonymy and Histologic Characters of East London Boxwood (*Gonioma Kamassi*), Biochem. Jour., 1911, vi, 127.

1. Strauss, H.: Diätbehandlung innerer Krankheiten, Berlin, 1908, p. 141.

ascribed to some inconsequential accompaniment of the new routine. Despite all these considerations, it must be admitted at the present moment that there is a large body of clinical evidence indicating that even in severe cases of diabetes a considerably larger utilization of ingested carbohydrate is observed on an oatmeal régime than is the case with carbohydrates from other sources. It should be clearly emphasized that von Noorden himself pointed out that the oatmeal feeding is without influence in very many cases and may even be detrimental in some instances. It is more particularly indicated in glycosurias of the severe type, with attendant acetonuria.

Granting the validity of some of the reported evidence both from Europe and this country, the explanation of the good results achieved is far from apparent. Why should the utilization of starch by the diabetic become conspicuously favorable when this carbohydrate is derived from a special cereal, the oat? This pertinent question was debated by a number of the prominent European clinicians at the last annual meeting of German internists in Wiesbaden.[2] Several possibilities have been advanced and experimentally investigated. For example; oat starch may possess special chemical structural characteristics which render it unique and specific in this direction, in distinction from the starch of wheat or barley. This can by no means be regarded as evident from comparative feeding trials. It should be stated, however, that Magnus-Levy, among others, believes in a peculiar transformation of oat starch by microorganisms in the alimentary canal, whereby it is converted into fermentation products rather than into simple sugars, as is ordinarily the case with starches. Naunyn early offered a similar explanation for the failure of oatmeal feeding to increase the sugar output in diabetics, by assuming that it is not utilized as sugar.

Other investigators have attributed the superiority of the oatmeal diet to some non-carbohydrate component in the cereal; but attempts to extract such an accessory product (perchance some enzyme, hormone, or antiketogenic compound) have not been very successful. Without denying for the present some specific virtue of the oatmeal itself, it seems as if the preponderance of present opinions is in favor of what may be termed the "negative" virtues of the dietary. By this we may understand the removal or lack of certain objectionable elements pertaining to the usual dietaries (meat and fats) which the oatmeal gruels replace. The latter are above all comparatively low in protein, with an abundance of fat amounting to as much as 2,500 calories (300 grams of butter). The reduction in protein metabolism and the incident replacement of animal by vegetable protein are quite in line with current tendencies and may offer an adequate explanation. It is essentially a fat-carbohydrate diet which is thus instituted.

2. Verh. d. deutsch. Kongresses f. inn. Med., 1911, xxviii, 246.

The complicated nature of the matter is further evidenced by Minkowski's statement that the oatmeal diet is attended by a tendency towards retention of water and edema formation. Competent observers, such as Minkowski and His, incline to the belief that the conflicting views can best be reconciled by the assumption of more than one effective factor in the problem. It may not be amiss to remark that the possibility of a wide-spread employment of oatmeal in the diabetic dietary through layman's advice or careless advertising presents a danger which should be strenuously guarded against. The proper management of diabetes is characterized by an appropriate dietotherapy applied to individual cases. Every patient needs the conscientious advice of a competent observer.

DEATHS OF PHYSICIANS IN 1911

During 1911, the deaths of 2,145 physicians in the United States and the Dominion of Canada were noted in THE JOURNAL. Reckoning on a conservative estimate of 140,000 physicians, this is equivalent to an annual death-rate of 15.32 per 1,000. For the nine previous years the death rates were as follows: 1910, 16.96; 1909, 16.26; 1908, 17.39; 1907, 16.01; 1906, 17.2; 1905, 16.36; 1904, 17.14; 1903, 13.73, and 1902, 14.74. The average annual mortality for the period from 1902 to 1911 inclusive was therefore 16.11 per 1,000. The age at death varied from 23 to 99, with an average of 59 years, 10 months and 5 days. The general average age since 1904 is 59 years, 7 months and 3 days. The number of years of practice varied from 1 to 76, the average being 32 years, 10 months and 9 days. The general average for the past eight years is 31 years, 5 months and 23 days. The chief death causes in the order named were cerebral hemorrhage, "heart disease," senility, pneumonia, external causes and nephritis.

CAUSES OF DEATH.—There were 343 deaths assigned to general diseases; 314 to diseases of the nervous system; 301 to diseases of the circulatory system; 209 to diseases of the respiratory system; 149 to diseases of the digestive system; 162 to diseases of the genito-urinary system; 161 to external causes; 207 to senility; 2 to diseases of bones and 4 to other causes. Among the principal assigned causes of death were cerebral hemorrhage, 237; "heart disease," 225; senility, 207; pneumonia, 183; external causes, 161; nephritis, 158; accidents, 109; cancer, 94; tuberculosis, 82; after surgical operations, 80; typhoid fever, 38; appendicitis, 37; septicemia and suicide, each 34; diabetes, 33; angina pectoris, 25; arteriosclerosis, 24; gastritis, 23; homicide, 18; cirrhosis of liver, 16; influenza and anemia, each 15; locomotor ataxia, 13; cholecystitis and general paralysis, each 12; meningitis, 11; gastric ulcer and intestinal obstruction, each 10; endocarditis, 9; bronchitis, 8; alcoholism and prostatitis, each 7; erysipelas, rheumatism, drug addiction, mental alienation and pleurisy,

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each 5; enteritis and peritonitis, each 4; dysentery and paralysis agitans, each 3; anterior poliomyelitis, malaria, embolism and mastoiditis, each 2, and diphtheria, cholera nostras, tetanus, pellagra, scarlet fever, epilepsy and pericarditis, each 1.

The causes assigned for the 109 deaths from accident were automobiles, 21; falls, 20; poison, 15; railway casualties, 13; by animals, 8; heat exhaustion, 7; asphyxia, 6; firearms, 5; drowning and street cars, each 4; burns, 2, and mines, runover, crushing and freezing, each 1. The 34 physicians who ended their lives by suicide selected the following methods: firearms, 15; poison, 11; cutting instruments, 4; strangulation, 2, and asphyxia and jumping from high places, each 1. Of the 18 homicides 15 were due to firearms; 1 to cutting instruments and 2 to crushing injuries from blunt instruments. Of these 4 occurred in feuds or affrays.

AGES.—Of the decedents 26 were between the ages of 91 and 99; 183, between 81 and 90; 390, between 71 and 80; 475, between 61 and 70; 423, between 51 and 60; 304, between 41 and 50; 222, between 31 and 40, and 74, between 23 and 30. The greatest mortality occurred at the age of 69 when 69 deaths were recorded; at 65 with 61 deaths; at 62, with 56 deaths; at 55 and 58, with 55 deaths; and at 73 when 54 died. There were 9 deaths at 91; 4 at 93; 3 each at 92 and 94; 2 each, at 96, 97 and 99, and one death occurred at 95 years of age.

YEARS OF PRACTICE.—By periods of ten years the deaths were as follows: In the first decade 201, of whom 6 died after having been in practice less than a year; in the second decade, 317; third decade, 438; fourth decade, 499; fifth decade, 372; sixth decade, 258; seventh decade, 76, and eighth decade, 7, one of whom had been in practice for more than 75 years.

MILITARY SERVICE.—During the year, 344 died who had served in the Civil War, and of these 94 served under the Confederate flag, and 103 were medical officers of United States Volunteers. There were 5 veterans of the Mexican War; 17 had served in the Spanish-American War; one had been a surgeon in the early campaigns against Indians on the western frontier, and 8 had seen service in foreign wars. The Army lost 13 medical officers, past and present, and in addition, 8 officers of the Medical Reserve Corps on the active and inactive lists, and 25 acting assistant or contract surgeons. The Navy lost 15 officers, and the Public Health and Marine-Hospital Service, 11, including its surgeon-general. The death loss of the Organized Militia was 26, of whom 4 had attained the grade of surgeon-general.

MEDICAL POSITIONS.—Medical colleges sustained the loss of 157 professors, lecturers, instructors and demonstrators; hospitals lost 334 members of staffs; municipalities, townships and counties, 185 health officers or physicians, and boards of education and school boards, 92 members. There were 45 deaths of members of state boards of health and medical registration and examination; 56, of coroners and medical examiners, and 124 of railway surgeons.

Of those who died, 1 had been a governor; 19 had been members of state senates, and 48 members of houses of representatives; 41 had been mayors; 31 aldermen or councilmen; 52 had served as civil officers; 12 as postmasters; 30 as editors, medical or lay; 19 were also clergymen, of whom 8 were or had been medical missionaries; 2 had been attorneys; 6 were consuls, and 15 had been medical directors of life insurance companies or fraternal insurance societies.

Current Comment

EFFECTS OF STRENUOUS ATHLETICS IN THE NAVY

An interesting pronouncement concerning the effects of competitive athletics, as carried on in schools and colleges for the training of young men, is contained in the report of the Surgeon-General of the Navy for 1911. With an unparalleled opportunity for observing, during their school course and in their subsequent careers, large classes of young men in the navy, the Bureau of Medicine and Surgery has formed the opinion that competitive and spectacular athletics are undesirable. The prolonged rigorous course of physical exercise necessary to excel in physical sports is believed to be dangerous in its after-effects. As applied to the navy, it is said that under the conditions of service at sea it becomes impossible to continue rigorous exercise, the individual falls prey to degenerative changes, tends to become obese and to lose physical stamina and fails in the end to render as many years of efficient service as does his less athletic but more symmetrically developed classmate. Undoubtedly, similar conditions prevail in civil life among former athletes who cannot or do not keep up in considerable measure their former habits of exercise. The physical records of 625 former athletes of the Naval Academy classes from 1891 to 1911 were examined to determine the bearing of early overtraining on physical efficiency in after-life. Of these, nine have died and twelve have retired. Of the twenty-one fatalities, six have been due to tuberculosis, eight to mental and nervous diseases, two indirectly to alcoholism and one death each to acute dilatation of the heart and valvular disease of the heart, both directly attributed to track- and crew-racing. One was due to an injury received in playing foot-ball. Of the remaining 604 athletes in the service, 198 have disabilities which have been noticed in the official records and to which athletics stand in a possible or probable causal relation. These have not resulted in total disability, but in impaired service. Of these 198 in whom subnormal conditions are present, in forty-eight the conditions are referable to the heart or blood-vessels, such as arteriosclerosis, organic heart disease, heart murmurs, irregular and rapid heart action and hypertrophied and dilated heart. In sixteen, the joints or motor apparatus are involved; in eleven, the kidneys; seventeen are either frankly tuberculous or have had symptoms indicative of tuberculosis; in sixteen there is neurasthenia associated with gastric complications; there were twenty-five

cases of appendicitis and fifteen of hernia, the latter two troubles appearing to be associated particularly with a foot-ball record. The opinion is also expressed that long distance crew- or foot-racing is productive of serious harm. The opinion in regard to this form of exercise is shared by school authorities in civil life best qualified to judge. The figures quoted constitute a severe arraignment of strenuous competitive athletics as carried on in our schools and universities, and corroborate the observation said to be made that prize-fighters, as a rule, succumb early, frequently to tuberculosis or to other degenerative diseases, though in the latter instance dissipation may have a determining influence. It is not, of course, to be understood that the Surgeon-General or the Bureau of Medicine and Surgery believes that athletics in the navy or anywhere else should be abandoned entirely; it is, in their view, the strenuous competitive form which is deleterious. The indulgence in moderate athletics is always to be encouraged, and in the Naval Academy the Swedish system of exercises is now being tried and is giving satisfactory results.

MEDICAL EDUCATION AND MIDWIFERY

There has been most gratifying progress in medical education in this country during the last seven years. Standards of admission to medical schools have been advanced so that, instead of three schools in 1904, which were requiring one or more years of collegiate work for admission, now forty-seven colleges are exacting that requirement. And medical education generally has undergone much improvement. New buildings have been erected, new laboratories established, better equipment furnished, better hospital facilities added, large endowments secured and more expert, full-time teachers employed. Furthermore, there has been a great deal of study and discussion of methods of teaching and of the subjects to be included in the medical curriculum. But in spite of all this, one of the most important departments of the medical course, one of the major branches, seems to have been neglected or overlooked. In what subject is the young physician more in need of thorough training than in obstetrics? Maternity cases are sure to form a large portion of his earlier professional calls and even complicated cases requiring the skill of experts often come in the young physician's practice. Again, it is well known that puerperal infection and infant mortality are due, to a certain extent, at least, to ignorance and lack of skill on the part of the midwife or the physician. Nevertheless, it is an astounding fact that only a few of the medical schools in this country have adequate facilities or make ample provision for a thorough training in this important branch. In fact, investigations have shown that a large number of the medical schools in this country have very few or no maternity clinics. Most important and timely, therefore, is the article we publish this week from Dr. J. Whitridge Williams on "Medical Education and the Midwifery Problem." It is to be hoped that this article will stimulate a constructive study and discussion of this subject so that long-needed improvements may be made. Dr. Williams' criticisms offset to some extent the congratulations which are due for the great improvements made in other lines of medical education. In fact, the defects are made the more glaring in contrast with the marked improvements in other departments of medical teaching. So, in the efforts to keep up the splendid progress recently made in medical education, the need of well conducted maternity hospitals in connection with our medical schools should not—must not—be overlooked.

JUDICIAL WISDOM!

Indiana has a good pure food law and, more important still, it has efficient and active officers to enforce it. One of the valuable provisions of the Indiana act was designed to protect the public from the sale of impure milk. The newspapers have recently chronicled the fact that an Indiana dairyman was found by the state inspectors to be selling dirty milk. The officers purchased some of this milk for the purpose of securing evidence against the dairyman. They found the dirt and the dairyman was prosecuted for selling a filthy product. When the case came into court, the attorneys for the milk dealer maintained that their client was not guilty of violating the law because it must be shown that the milk was purchased for human food, when, as a matter of fact, it was purchased in this instance for purposes of analysis. The judge before whom the case came sustained the motion of the defendant's attorneys and held that the dairyman was not guilty of an offense under the Indiana Food and Drugs Act! We refrain from commenting on this example of judicial wisdom for fear of violating the postal laws.

A PSYCHIATRIC OPPORTUNITY

At a recent meeting of the Board of Trustees of Bellevue Hospital, New York, a long-discussed amalgamation was finally effected, whereby the alcoholic, prison and psychopathic wards were made an administrative unit, under the care of the resident alienist of the hospital. This movement is in accordance with the best teachings of modern neurology and psychiatry, and in the formation of such an administrative unit the trustees are showing a clear-headed appreciation of modern trends in the care of this class of patients. These patients belong together; their requirements are such that the neurologic and mental sides of the problem stand out in sharp relief on a background of surgery or internal medicine. With this amalgamation of services the necessity for more hospital interns is made evident, and Bellevue now offers a special opportunity for four resident interns. Such an internship should appeal to hospital graduates who are seeking advanced work in medicine. Just how important the service is, becomes apparent when one reads in the yearly reports that over 10,000 patients enter the Bellevue alcoholic and prison wards yearly, and that there are at least 4,000 additional admissions a year to the psychopathic wards. It is only a short time since the trustees enlarged the psychopathic wards by the erection of separate wards for disturbed patients. The enlargement of the staff of interns, the development of an autonomous service, with resident interns continuously on service, is one of the most

important advances in hospital administration in the City of New York, and the gain to the individual student of medicine, who seeks a thorough grounding in this very important branch of medicine, is great. No such opportunity for the study of neurologic and psychiatric material can be found elsewhere. Furthermore, the numerous medical and surgical complications, the rarer forms of poisoning, suicidal and homicidal accidents, offer ample occasion for thorough preparation in internal medicine as well as in advanced psychiatry, and the prison wards enlarge the medicolegal horizon of the man anxious to improve his chances of getting acquainted with world-wide questions.

THE WORLD'S PROGRESS IN 1911

The *New York Times* inquired of a number of famous personages what they considered the five most notable achievements of the year just passed; and forty-four groups of answers were received.[1] It is of interest to consider to what extent the science and art of medicine received recognition in them. Progress in our profession was noted not at all in thirty-four of the groups of answers. Among the remaining ten opinions was that of President Taft, who gave as the second of his answers "the demonstration of the complete success of the prophylactic in typhoid fever, as shown by the fact that in the mobilization of 15,000 troops in Texas for three months there was only one case of typhoid." Count Bernstorff, the German ambassador, noted among the five greatest achievements of 1911, Ehrlich's salvarsan and "Wassermann's progress in cancer research." President Thwing, of Western Reserve University, emphasized the growth of medical education and research exhibited in the strengthening of medical schools and research institutes. President Wheeler, of the University of California, noted "Ehrlich's discovery in specific chemotherapy." Booker T. Washington noted "the discovery of Dr. Simon Flexner, of the serum for the cure of spinal meningitis." The Rev. Dr. Henry Van Dyke commented on "the advance made in restoration surgery." James Bryce, the British ambassador, observed: "In modern times most of the events of the highest ultimate significance have been discoveries in the realm of nature, or inventions in the realm of industry; and their magnitude is seldom known at first. Little was said of the discovery that mosquitoes are the carriers of yellow fever and of the intermittent fevers; yet what immense consequences are already seen to flow from the determination of that fact. In science when a stone is started down a hill, no one can tell how far it will go." Dr. Ehrlich modestly makes no comment on his own epochal work, but considers "the greatest achievement of the past decade the knowledge that has been gained incidental to the discovery of radium with regard to the transformation of matter." Senator Williams, of Mississippi, applauds the practical application of vaccination methods to prevent typhoid fever. Professor Osgood, of Columbia University, finds among the world's five greatest achievements the year's advance in curative and preventive medicine. The forty-four answers were from as diverse viewpoints as those of Pope Pius X, the King of Italy, Carmen Sylva, Lieutenant Peary, governors of states, economists, writers in fiction as well as in science, playwrights, editors, noblemen and "Darwinites," besides those of the notable men quoted; the recognition accorded medical achievements was therefore not so scanty as would on first thought appear. For every man will naturally give paramount position to the progress in his own field.

[1] New York Times, Dec. 31, 1911, and Jan. 1, 1912.

Medical News

ILLINOIS

Further Donation to Medical Library.—In addition to the medical library donated to the Burnham Atheneum, Champaign, by Dr. Hartwell C. Howard, the medical library of the late Dr. Levi S. Wilcox has been donated by his heirs to the Atheneum.

Decision Regarding Medical Department Postponed.—The Supreme Court, on the final day of its fall term, failed to hand down a decision in the case involving the validity of an appropriation for the Medical School of the University of Illinois. It is probable that no decision in this case will be rendered before the end of March.

Chicago

Memorial Tablet Unveiled.—A bronze tablet in memory of those who lost their lives in the Iroquois Theater fire and which is to be placed in the waiting room of the Iroquois Memorial Hospital, was unveiled last week.

Personal.—Dr. John S. Nagel, who was operated on recently for appendicitis, is reported to be convalescent.——Dr. William S. Sadler has returned from Europe.——Dr. George F. Sorgatz has been appointed bacteriologist of the State Board of Health. ——Dr. Cornelius Gunderson was overcome by gas while attempting to resuscitate seven persons who had been asphyxiated.——Dr. Samuel Willard celebrated his ninetieth birthday, December 31.

INDIANA

Health Officials' Status.—According to a decision of the Indiana Appellate Court, in affirming the decision of the Gibson Circuit Court, the members of the board of health of a city are governmental officers and not employees. Dr. Edwin Watts has sued the city of Princeton, for pay for services on the board of health, and although he had been promised $100 per year by the mayor and city council, yet no ordinance had been passed, the court holding that until such ordinance is passed defining such salary, he has no cause of action for such services, which he can force in the courts.

Personal.—Dr. Augustus L. Marshall of Indianapolis, has been appointed superintendent of the Deaconess Hospital, in that city, vice John Aldag, resigned.——Dr. Israel S. Millstone has been elected president, Dr. Winfield S. Faulds, secretary and executive officer, and Dr. W. P. Laue, treasurer of the Gary Board of Health.——Dr. Edward F. Wagner, Fort Wayne, who was operated on recently on account of malignant disease, is reported to be improving.——Dr. John R. Pearson, Bedford, is reported to be seriously ill with septicemia and was taken to St. Vincent's Hospital, Indianapolis.——Dr. James McCall, Terre Haute, has been placed in charge of the department of diseases of the eye, ear, nose and throat in the Rose Dispensary.

MICHIGAN

Public Health Committee Appointed.—The State Medical Society, at its annual meeting in Detroit, authorized the formation of a new committee on public health. The duty of this committee is to extend throughout Michigan work similar to that done by the Public Education Committee of the American Medical Association. The committee is made up as follows: chairman, Dr. Francis A. Rutherford, Grand Rapids, and Drs. Jean Solis, Ann Arbor; Blanch N. Epler, Kalamazoo, and Rhoda Grace Hendricks, Jackson.

Personal.—Dr. Arend Van Der Veen, the oldest practitioner of Grand Haven, was the guest of honor at the meeting of the Ottawa County Medical Society, December 15, and was presented by the members of the organization with a gold-

headed ebony cane.——Dr. George L. Chamberlain, medical superintendent of the Michigan Home for the Feeble-Minded and Epileptic, Lapeer, has resigned and will practice in California. Dr. Harley A. Haynes, for five years assistant at the home, has been selected to fill the vacancy.——Dr. Sharon J. Thoms and family, Grand Rapids, have arrived at their new field of duty in Muscat, Arabia.

MISSISSIPPI

Physicians' League Formed.—Physicians of Charleston have organized a Physicians' League in Tallahatchie County to give aid and encouragement to the public health and sanitation campaign now being waged by the State Board of Health. The members of the league will give their services to the community as a local board of health without remuneration and will give their time, attention, advice and personal service at all times in matters pertaining to the cause of sanitation and the public welfare.

New Officers.—The following recent elections are reported: East Mississippi, Four-County Medical Society, at Tupelo, December 19-20—president, Dr. Woodie N. Reed, Tilden, Itawamba County; vice-presidents, Drs. Sam. Nabors, Evergreen, Itawamba County; William J. Grady, Amory, Monroe County; Charles Edwin Spencer, Verno, Lee County, and James A. Donaldson, Okolona, Chickasaw County; and secretary, Dr. Felix Joel Underwood, Nettleton, Lee County (reelected).——Hinds County Medical Society—president, Dr. Benjamin L. Cully, and vice-president, Dr. Walter B. Lobson, both of Jackson.——Tri-County Medical Society, at Brookhaven, December 6—president, Dr. John T. Butler, Brookhaven; vice-presidents, Drs. D. W. Magee, Caseyville, Lincoln County; William P. Patterson, Beauregard, Copiah County; S. Paul Klotz, McComb, and Dr. Dudley Watson Jones, Brookhaven, Lincoln County, secretary.

NEW YORK

Hempstead Hospital Sold at Auction.—The Hempstead Hospital which was given to that place by Mrs. O. H. P. Belmont, on condition that the town should support the institution, was sold at auction for $10,000 because the residents of the town have failed to fulfil their agreement.

Military Surgeon to Retire.—Colonel Albert H. Briggs, Buffalo, chief surgeon of the Fourth Brigade, N. G. N. Y., gave a farewell dinner to his brethren officers, December 19. Under the law Colonel Briggs retires in a short time from the service on account of attaining the age limit.

Local Medical Society Election.—At the annual meeting of the Yorkville Medical Society, December 18, the following officers were elected: President, Dr. Sidney D. Jacobson; vice-presidents, Drs. Otto Glogau and Jacob Heckmann; recording secretary, Dr. Herman Schwarz; corresponding secretary, Dr. Friedrich Grosse, and treasurer, Dr. Anton Schoen.

Local Medical Societies Meet.—At a dinner given in Little Falls, December 19, an organization was effected and the following officers were elected: president, Dr. William D. Garlock, and secretary-treasurer, Dr. George H. Smith.——The Dunkirk-Fredonia Medical Society held its annual meeting December 13 in Dunkirk and elected Dr. George E. Smith, Fredonia, president; Dr. Walter H. Vosburg, Dunkirk, vice-president, and Dr. William J. Sullivan, Dunkirk, secretary-treasurer.

Elections.—The following elections of officers of medical societies have recently occurred: Chemung County, at Elmira, December 19; vice-president, Dr. William Brady; secretary, Dr. Charles F. Abbott, and treasurer, Dr. George V. R. Merrill, all of Elmira.——Wayne County, at Lyons, December 18; president, Dr. Jason N. Robertson, Wolcott; vice-president, Dr. Alexander Walker, Macedon; and secretary-treasurer, Dr. Major A. Veeder, Lyons.——Otsego County, at Oneonta, December 19; president, Dr. Arthur H. Brownell, Oneonta; vice-president, Dr. Willis S. Cooke, Otego; secretary, Julian C. Smith, Oneonta, and treasurer, Dr. Frank L. Winsor, Laurens.——Franklin County, at Malone, December 12; president, Dr. Elisha A. Rust, Moira; vice-president, Dr. Frank F. Finney, Burke, and secretary-treasurer, Dr. George M. Abbott, Saranac Lake.——Tioga County at Owego, December 12; president, Dr. Harry T. Dunbar, Candor (reelected); vice-president, Dr. William A. Moulton, Candor; secretary, Dr. Sidney W. Thompson, Owego, and treasurer, Dr. James M. Barrett, Owego.——Chautauqua County, at Dunkirk, December 12; president, Dr. Henry A. Eastman, Jamestown; vice-presidents, Drs. Nelson G. Richmond, Fredonia, and George F. Smith, Falconer; secretary-treasurer, Dr. Josiah W. Morris, Jamestown.

New York City

Regiment Inoculated Against Typhoid.—Four hundred men and officers of the Seventy-First Regiment, N. G. N. Y., were inoculated with typhoid serum by the regimental surgeon, Dr. Karl A. Connell and the hospital corps at the armory on December 28. All those who received the treatment did so voluntarily.

Trinity Hospital Opened.—On December 24 the dedication exercises were held of Trinity Hospital in East New York. This is a private institution equipped and maintained by Dr. William Frances Campbell, as a memorial to his mother. The hospital is intended for use by people in moderate circumstances and moderate fees will be charged. The institution will accommodate about fifty patients.

Personal.—Dr. Philip F. O'Hanlon, coroner's physician, was operated on for abdominal abscess on December 29 and his condition is reported as favorable.——Dr. Peter K. Olitsky has been appointed assistant adjunct to the gynecologic department of the Har Moriah Hospital.——Dr. George Victor Hudson was assaulted and robbed by five young men in his home, December 19.——Dr. Morris Friedman, East New York, underwent operation on the index finger of his right hand for septicemia, December 15.

Antivivisectionists Plan New Campaign.—An organization calling itself the Vivisection Investigation League held a meeting on December 16 at the home of Mrs. Stuyvesant Fish. On this occasion John Sherwin Crosby urged them to endeavor to have a bill passed establishing a commission for the investigation of vivisection which should see that it was carried out under proper conditions. This organization recently gave a benefit performance in one of the theaters for the purpose of raising funds to further its work.

The Doty Case.—A meeting of New York physicians was held at the Academy of Medicine, December 13, to pass on the petition to Governor Dix, asking for the reappointment of Dr. Alvah H. Doty as health officer of the port of New York. Dr. Abraham Jacobi presided at the meeting and Dr. R. Mitchell Prudden was secretary. Resolutions were unanimously adopted, stating that the public confidence in Dr. Doty has been well merited by sixteen years of skilful health protection; that Dr. Doty had devised and perfected new methods for the detection and prevention of disease, now generally in use; that his wide knowledge of practical sanitation, his exceptional personal familiarity with the nature and control of communicable diseases, his long experience in quarantine service, his successful control of serious emergencies, the close touch and cordial relationship which he has maintained for many years with the federal and other quarantine authorities have given steadfast assurance of safety to the personal and commercial interests which are subject to disquiet and damage in the face of threatened epidemics.——On December 28 it was reported that Governor Dix had sustained the report of Commissioner Bulger, who recommended that Dr. Doty be dismissed as health officer of the port and had asked for Dr. Doty's immediate resignation.——The Academy of Medicine of North Jersey, has joined in the protest against the demand of Governor Dix that Dr. Doty resign as health officer and has voted not only to appeal to Governor Dix, but also to Governor Woodrow Wilson to use his influence in behalf of Dr. Doty. The academy also declared that Governor Dix's letter asking for the resignation of Dr. Doty was the "most brutal and unsubstantiated letter ever written by a state executive."

NORTH CAROLINA

About Hospitals.—The physicians of Hendersonville have headed a movement to construct and equip a local hospital, which they hope to have ready to open this year.——Physicians of Asheville, at a meeting held December 16, passed a resolution favoring the establishment of a municipal and county hospital in Buncombe County to be under the control of the local authorities.

Requires President to State Policy.—At the annual meeting of the Robeson County Medical Society, December 20, a resolution was adopted requiring the president-elect to deliver at the first meeting after his election an annual address in which he is to set forth and pledge himself to certain policies for the coming year and requiring further, at the end of the year, a report from the secretary of the society as to the manner in which the president has fulfilled his pledges.

New Officers Elected.—The following reports of elections in county medical societies have been received: Davidson County, at Lexington, December 5; president, Dr. Charles A. Julian, Thomasville; vice-president, Dr. David J. Hill, Lexington, and

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secretary, Dr. R. J. Terry, Lexington.——Buncombe County, at Asheville, December 18; president, Dr. Henry H. Briggs; vice-president, Dr. Paul H. Ringer, and secretary-treasurer, Dr. Gaillard S. Tennent, all of Asheville. One hundred members were present at the annual banquet at which Dr. J. Howell Way, Waynesville, president of the State Board of Health, Dr. Alfred A. Kent, Lenoir, president of the Medical Society of the State of North Carolina, and others were guests of honor.——Mecklenburg County, at Charlotte, December 16; president, Dr. Thomas F. Costner, Charlotte; vice-presidents, Drs. Leighton W. Hovis, G. McD. Armond and John K. Ross; and secretary-treasurer, Dr. Harry A. Wakefield (reelected), all of Charlotte.——Robeson County, at Maxton, December 20; president, Dr. A. Bascom Croom, Maxton; vice-president, Dr. Benjamin F. McMillan, Red Springs, and secretary, Dr. John Knox, Lamberton.——Wake County, at Raleigh, December 14; president, Dr. Albert Anderson, Raleigh; vice-president, Dr. B. W. Burt, Enno; secretary, Dr. C. W. Horton, and treasurer, Dr. Kemp P. Battle, Raleigh.——Guilford County, at Greensboro, December 14; president, Dr. John W. Long, Greensboro; vice-president, Dr. William J. McAnally, High Point, and secretary-treasurer, Dr. J. Parran Jarboe, Greensboro.——Durham County, at Durham, December 8; president, Dr. Robert L. Felts; vice-president, Dr. George H. Ross, East Durham, and secretary-treasurer, Dr. S. L. Booker (reelected).——Gaston County, at Gastonia, December 5; president, Dr. James W. Reid, Lowell; vice-presidents, Drs. David A. Garrison, Gastonia, and Cyrus J. McCombs, Kings Mountain (reelected); and secretary and treasurer, Dr. Thomas C. Quickel, Stanley.

Personal.—Drs. J. Howell Way, Waynesville; Watson S. Rankin, Raleigh; Clarence A. Shore, Raleigh, and John A. Ferrel of the State Board of Health have returned from the meeting of the American Public Health Association in Havana. ——Dr. John M. Blair, Monroe, is reported to be seriously ill with cerebral hemorrhage.——Major Robert S. Woodson, M.C., U. S. Army, retired, has located in Tryon.

PENNSYLVANIA

Stewart Speaks Before Biologic Research Society.—The Society for Biological Research of the University of Pittsburgh, held the first of its special meetings for the year 1911-12, December 14, at which time Dr. George Neil Stewart, professor of experimental medicine and director of the Cushing Laboratory at Western Reserve University, Cleveland, presented to the society the results of some of his recent work on the rate of blood-flow in man.

Jefferson Alumni Meeting.—The third annual meeting and banquet of the Jefferson Medical Alumni Association of Northeastern Pennsylvania was held in Scranton, November 25, and the following officers were elected: president, Dr. Harry W. Albertson, Scranton; vice-presidents, Drs. Edward R. Gardner, Montrose, John T. Howell, Wilkes-Barre, and Henry M. Neale, Upper Lehigh; secretary, Dr. James Norman White, Scranton, and treasurer, Dr. John E. Schiefly, Ashley.

To Investigate Matter of Fees.—The Shamokin Medical Association, claiming that fees have been demanded from workingmen at the Fountain Springs State Miners' Hospital, have furnished Governor Tener with several affidavits, the chief one being from James J. McCall, a Shamokin miner, alleging that Dr. Jonathan C. Biddle, Fountain Springs, surgeon-in-chief, charged $100 for treating his child brought to public ward. Governor Tener has requested Thomas M. Richter, president of the hospital, to investigate the matter and make a report to him.

Elections of Officers.—At the annual meeting of the Cambria County Medical Society held in Johnstown, December 14, the following officers were elected: president, Dr. Sylvester S. Kring, Johnstown; vice-presidents, Drs. John L. Sagerson, Johnstown, and Harry M. Stewart, Ehrenfeld; secretary, Dr. Henry J. Cartin, and treasurer, Dr. Francis Schill, Jr., both of Johnstown.——Berks County Medical Society, at its annual meeting, December 12, elected the following officers: president, Dr. Henry W. Saul, Kutztown; vice-presidents, Drs. William S. Bertolet and James R. Gerhard; secretary, Dr. Henry P. Brunner; corresponding secretary, Dr. Ralph A. Harding, and treasurer, Dr. Rufus E. Le Fevre, all of Reading.

Personal.—Dr. William H. Kohler has resigned as resident physician of the York Hospital and will practice in Middleton. ——Dr. John D. Carr, Merrittstown, slipped on an icy pavement in front of his office, December 5, and suffered severe injuries.——Dr. Harvey T. Billick, Monongahela, has been appointed a member of the board of managers of the Morganza Reform School.——Dr. James Earl Ash, pathologist of the Norristown State Hospital, has resigned and will teach in Harvard Medical School.——Dr. Frederick H. Evans, Chester, was given a leather satchel and a pocket case of instruments by the firemen of the city, at the annual banquet given by the Firemen's Relief Association, November 22.——Dr. George M. Studebaker has resigned and is succeeded by Dr. David V. Reinoehl as a member of the health board of Erie.——Dr. George C. Reese, of Mahanoy City, was elected superintendent and surgeon-in-chief of Trevorton, Shamokin and Mount Carmel Miners' Hospital, at Shamokin by the trustees of that institution on December 27.

Philadelphia

Hospital Contract Awarded.—On December 28, a contract was awarded for the erection of two additional ward buildings and a connecting corridor at the Philadelphia Hospital for Contagious Diseases. The bid accepted was $122,680.

Hospital Fund Growing.—The Douglas Hospital fund received a Christmas gift of $1,000 and with cash contributions of $298 had on December 30, a total of $11,590.57, leaving only a balance of $3,409.43 to pay off the builder's mortgage of $15,000.

Personal.—Dr. Roland G. Curtin was unanimously elected first vice-president of the General Alumni Society of the University of Pennsylvania, December 15.——Alexander M. Wilson, director of sociology in the Phipps Institute, has been appointed assistant director of the Department of Health and Charities.

Pediatric Society Offers Prize.—The Philadelphia Pediatric Society offers a prize of $100 to be known as the Philadelphia Pediatric Society Prize, for the best paper pertaining to pediatrics. The competition is open to members of the society only and the prize will be awarded at the June meeting of the society.

City Death-Rate Reduced in 1911.—The city's death-rate during 1911 was materially reduced, the rate having been lowered to 16.50 per 1,000 of population. The total number of deaths this year is 26,092, as compared with 26,879 in 1910. The campaign to prevent infant mortality resulted in reducing the number of deaths of babies, from 5,232 last year to 4,604 this year.

Typhoid Epidemic.—During the week ended December 30, there was a great increase in typhoid fever, the number of cases jumping from twenty-one the previous week to 126. Of these sixty-six were reported from the Twenty-Second ward. This outbreak has been traced to the break in the big distributing main of the Upper Roxborough filter plant on November 28 last.

Children Raise Money for Jewish Sanatorium.—The Junior Auxiliary of the Philadelphia Jewish Sanatorium for Consumptives, at Eagleville, held a meeting in the Benjamin F. Teller Memorial School, at Broad and Jefferson Streets, and several hundred dollars were turned over to the fund raised annually for this institution. Last year, the children raised $500, which was used in endowing a bed in the children's pavilion of the sanatorium.

Arrests in Cocain Crusade.—On December 29, John Henderson is said to have been held in $1,500 bail for court by Magistrate Beaton, charged with the illegal sale of cocain. Henderson's place was raided December 27 by a special detective of the State Pharmaceutical Board, and a number of police. Three other men were caught in the raid and a large quantity of cocain, apparatus for crushing and weighing the crystals, and account books, showing that Henderson's profit had been about $20 a day, and other incriminating records were found in the room and on Henderson's person. John Hanlon, who lives at the same house was also held in $1,000 bail for court.

VIRGINIA

Institution Needed for Feeble-Minded Women.—When the legislature convenes, it will be asked to appropriate several thousand dollars for the establishment of a state institution for feeble-minded women.

Hospital Nears Completion.—The Rockingham Memorial Hospital, Harrisonburg, is nearing completion and will be opened by the first of March. The late W. S. Leake left $20,000 toward the hospital and the remainder has been raised by subscription.

Progress in the Elimination of Hookworm.—The local inspectors of hookworm in the state under the Richmond Sanitary Commission met for a conference in Richmond and made their field reports to Assistant State Health Commissioner

Dr. Allen W. Freeman. The work of locating the disease and educating the people is progressing rapidly, and the inspectors find, from time to time, that certain localities are entirely free from the disease.

Needs of Hospital Board.—The General Hospital Board estimates that it will need $1,200,000 for the care of the four state hospitals for the insane and the epileptic colony during the next two years. Of this amount, $210,000 is the estimate for the State Epileptic Colony, and this will provide not only for 300 patients, but also for buildings and equipment to care for the full number of patients for which the institution was intended. This will also provide for the completion of the ward for the criminal insane at the Marion State Hospital.

Personal.—Dr. George R. Cottingham, Remington, while dressing a few days ago, put a scarf pin in his mouth and accidentally swallowed it and has had to be taken to Johns Hopkins Hospital, Baltimore, for treatment.——Dr. John W. Brodnax, South Richmond, has been appointed coroner of the district south of the James River, for a period of four years. ——Dr. Robert L. Corbell, Norfolk, has been reelected health officer of Norfolk County.——Dr. Herbert K. Drewry has been reelected assistant health officer; Dr. William G. Ashburn, Norfolk, assistant in the health department and Dr. LeRoy L. Sawyers, Great Bridge, has been reelected physician to the almshouse.——Dr. Lawnsdale J. Roper, Norfolk, has been recommended by the board of supervisors as coroner of Norfolk County.——Dr. James F. Hubbard, Jr., Esmont, has qualified as physician for the Second District of Richmond, vice Dr. Alick T. Smith, resigned.——Dr. Ashley P. Cutchin, Franklin, is reported to be seriously ill at Sarah Leigh Hospital, Norfolk, with typhoid fever.

WISCONSIN

Personal.—Dr. J. B. Hayes, Palmyra, fell on the porch of the Oconomowoc Sanatorium, December 16, and injured his arm. ——Dr. Frederick A. Kraft, health commissioner of Milwaukee, has, it is said, announced that he will resign if his salary is reduced to $5,000 from its present figure of $6,600.

Elections.—The following elections of officers of county medical societies are announced: Shawano, at Shawano, December 12—Dr. Edward Puchner, Wittenberg, president (reelected); Dr. William F. Baker, Birnamwood, vice-president, and Dr. Carl E. Stubenvoll, Shawano, secretary-treasurer.—— Milwaukee, at Milwaukee, December 14—Dr. John J. McGovern, president; Dr. Charles H. Lemon, vice-president; Dr. Daniel Hopkinson, secretary, and Dr. William Thorndike, treasurer, all of Milwaukee.——Green County, at Monroe, December 12—president, Dr. Lewis A. Moore, Monroe; vice-president, Dr. Edward Blumer, Monticello; secretary and treasurer, Dr. George S. Darby, Brodhead.——Kenosha County, at Kenosha, December 14—president, Dr. Herbert A. Robinson; vice-president, Dr. John H. Cleary, and secretary-treasurer, Dr. Curtis H. Gephart, all of Kenosha.——La Crosse County, at La Crosse, December 7—president, Dr. Charles H. Marquardt; vice-president, Dr. Gregor Smedal, and secretary and treasurer, Dr. George W. Lueck, all of La Crosse.—— Douglas County, at Superior, December 6—president, Dr. Thomas J. O'Leary; vice-president, Dr. Royal K. Lohmiller, and secretary and treasurer, Dr. W. E. Hatch, all of Superior. ——Juneau County, at Camp Douglas, December 5—president, Dr. Charles O. Cron, Camp Douglas; vice-president, Dr. Thomas S. Lawler, Lyndon Station; secretary-treasurer, Dr. Arthur T. Gregory, Elroy.——Dodge County, at Juneau, November 20 —president, Dr. Jesse A. Clason, Neosho; vice-president, Dr. Harry B. Sears, Beaver Dam, and secretary and treasurer, Dr. Guy W. Henika, Beaver Dam.

The Tuberculosis Question.—At a meeting of the Sheboygan Medical Society, December 15, the president of the County Antituberculosis Association delivered an address on "The Duty of the Medical Profession and the Antituberculosis Crusade," and the society unanimously adopted resolutions approving the object and aims of the association and recommending that the board of supervisors take the necessary steps toward the establishment of a county sanatorium.——John McCarthy, Reedsville, has offered a 5-acre tract in the town of Cato as a site for the proposed Manitowoc County Tuberculosis Sanatorium.——The county board of Racine County has appropriated $10,000 to be used in the erection of a sanatorium for the treatment of patients in advanced stages of tuberculosis.——The Marinette Antituberculosis Association was organized on December 8, with Dr. George Frederick Colter as president.——The DePere Public Health Association was organized November 24 to promote public health and cooperate with the Wisconsin Antituberculosis Association in the eradication of consumption. Dr. Norbert M. Kerston was elected president.——Dr. Henry Paul Rhode, Green Bay, has converted the top floor of the City Isolation Hospital into a sanatorium for the care of consumptives.——The Oconomowoc Branch of the Wisconsin Antituberculosis Association was recently organized with Dr. Michael R. Wilkinson, president, and Dr. Henry A. Peters, as secretary and treasurer.——The county board of Manitowoc County has ratified its original action appropriating $15,000 for the establishment of a county tuberculosis sanatorium.——Ontagamie County has voted to establish a tuberculosis sanatorium to cost $5,000.——The report of the State Tuberculosis Sanatorium, Wales, shows that during the four years the institution has been open, 74 per cent. of the patients treated in all stages of the disease have been improved and that 45 per cent. of the incipient consumptives have been discharged apparently cured. Altogether 655 patients have been treated, of whom ninety-five remained in the institution less than one month. Of the ninety patients in far advanced stages of the disease, only one patient has been discharged as apparently cured, but in six cases the progress of the disease was apparently arrested, and twenty-six were reported as improved.

GENERAL

Bequests.—The following bequests and donations toward hospitals have been recently announced:

Women's Hospital of Pittsburgh, about $2,000,000, by the will of Thomas N. Miller.

Douglas Hospital, Philadelphia, subscriptions of $8,328 toward the fund of $15,000 required.

Wills Eye Hospital, Philadelphia, and St. Agnes' Hospital, Philadelphia, each $500, by the late Patrick Gibbons.

Meetings to Come.—The Northern Tri-State Medical Society of Ohio, Michigan and Indiana will hold its annual meeting in Fort Wayne, Ind., January 9. The society will be the guest of the Allen County Medical Society.——The eleventh semi-annual meeting of the Chattahoochee Valley Medical and Surgical Association will be held in La Grange, Ga., January 16 and 17.

New Congress Officers.—At a meeting of the executive committee of the Congress of American Physicians and Surgeons, held recently, the following officers were elected for the next congress, which is to be held in Washington, D. C., in May, 1913: president, Col. William C. Gorgas, M. C., U. S. Army, Ancon, Canal Zone; secretary, Dr. Walter R. Steiner, Hartford, Conn., and treasurer, Dr. Newton M. Shaffer, New York City.

Local Symposiums on Hygiene.—The secretary of the Association of Military Surgeons of the United States announces that in accordance with a resolution passed at the recent meeting of that organization, it is proposed to hold local symposiums on military hygiene and sanitary organization and supplies during the present winter. The purpose of these courses would be patriotic in that they would attempt to show the physicians of the country how they could render efficient service in time of war. If those interested in the organization of such courses will communicate with the secretary, Maj. Charles Lynch, M. C., U. S. Army, 716 Union Trust Building, Washington, D. C., he will endeavor to make the necessary arrangements for instructors.

CANADA

Canadian Public Health Association.—The first annual meeting of the Canadian Public Health Association was held in Montreal, Dec. 13-15, 1911. Dr. Starkey, professor of hygiene at McGill University and president of the association, presided. He mentioned that Lord Strathcona had written wishing the efforts of the association in the interests of public health every success and enclosing his check for $2,500. The Duke of Connaught made an excellent speech dealing with public health matters. The Honorable R. L. Borden, Premier of Canada, said, in part, that in the past the government had somewhat neglected public health but that in the future a different course would be pursued. The Honorable Mr. Burrell, Minister of Agriculture, announced that it had practically been decided to establish a department of health of the National Government, that it might not be a separate department but would probably be under the jurisdiction of the department of agriculture. Sir Lomer Gouin, Premier of Quebec, announced that the province had decided to divide Quebec into ten sanitary districts, an expert reporting directly to the government for each district. These hygiene experts

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were to be appointed by competitive examination from the universities of McGill and Laval.

More than fifty papers were contributed. Among the papers read at the first general session were "Military Aspects of Sanitation," by Colonel Jones, Ottawa. "Conservation of Food by Cold," by Dr. P. H. Bryce, Ottawa, and "Medical Inspection and Care of Immigrants on Shipboard," by Dr. J. D. Pagé, Quebec. Dr. Pagé dealt with the necessity for a stricter and more efficient examination by ship surgeons of immigrants to Canada. Every day when navigation is open, between two and three thousand persons are examined at Quebec, and the entire responsibility rests on the medical inspectors of the port. Dr. Pagé pointed out that medical examination on shipboard was frequently more or less perfunctory. It is true that the regulations impose on ship surgeons the duty of careful examination of immigrants but these medical men do not live up to their obligations. No one has better opportunities for judging whether a person is mentally and physically fit than the ship surgeon and it would be in the interests of all concerned if he fulfilled his obvious duty. According to Dr. Pagé, the main reason that ship surgeons shirk their responsibility is that they are generally young men who take the position merely for a change and a cheap trip and they do not regard their duties very seriously. The real fault, however, lies in the fact that they are underpaid and thus the steamship companies are to blame. No inducement is offered to able medical men to become ship surgeons, and therefore it has come to pass that the position is taken only *pour passer le temps*. Dr. Pagé said that he had spoken to ship owners on the subject and their reply had been that so long as they could obtain an unlimited supply of surgeons at a small remuneration they saw no reason why they should increase their salaries. Dr. Pagé suggested that $1,000 a year would be a fair initial salary for a ship surgeon.

The papers read in the section concerned with social workers were chiefly contributed by women. Miss Ethel Hurlbatt, principal of the Royal Victoria College, read a paper on, "Work for Women as Sanitary Inspectors." She said, in part, that Canada was beginning to realize that the health and well-being of the individual involved that of the community, and that the latter was coming to see its duty in enforcing proper precautions for the care of individual lives. Miss Hurlbatt suggested that there was need of women sanitary inspectors in factories in which women were employed as well as in many homes.

In the section of medical officers of health, Mr. P. B. Tustin, Chief Food Inspector, Winnipeg, Man., called attention to the fact that food inspection to be efficient should cover the inspection of the raw material to the finished product, sanitation of premises and the cleanliness and personal habits of the people preparing the food. The general sentiment of those attending this section appeared to be in favor of government food inspection. The second general session was devoted to a symposium on town planning and housing. Dr. Charles A. Hodgette, medical advisor to the Canadian Conservation Commission, was especially severe on the housing and building methods which have been pursued in many Canadian cities. All the new and older cities, he declared, are, from the town-planning and housing standpoint, monstrosities. He also noted the tendency, which is in evidence in all these cities, of the method of warehousing humanity in apartment houses of all grades. Dr. Charles T. C. O. Hastings, city medical officer of health of Toronto, described the insanitary conditions present in the slum districts of New York, Milwaukee and Toronto. In Toronto, there are 919 families living under distinctly insanitary conditions, some only in one room, in tenements or in cellars. The view of those present seemed to be that large apartment houses and jerry buildings were detrimental to health and unesthetic in appearance. In place of these, garden cities and model dwellings, situated in the suburbs, were advocated with cheap and rapid means of transit. In fact, the plan now generally followed in Great Britain appeared to meet with most favor.

In the last general session, a symposium on biologic sewage disposal, Dr. P. H. Bryce, Ottawa, dealt with the physical and economic aspects of the subject. Dr. G. G. Nasmyth, Toronto, read a paper on the chemical problem involved in methods of sewage disposal. He stated his belief that the trickling filter system, from the point of view of economy and success, had come to stay, for the reason that this system was in line with the methods of Nature. Dr. J. A. Amyot, professor of hygiene at Toronto University, discussed the bacterial problems involved in biologic methods of sewage disposal. He pointed out that only by bacteria was it possible to dispose of sewage properly. Two methods were ordinarily employed for the purpose, the anaerobic and the oxidation. The oxidation method was more satisfactory by far, but even with it, it was utterly impossible to secure any system in the results. The engineer must decide the exact way in which the system should be worked. Slow sand filtration was not enough to depend on. Disinfection must also be employed. The new officers elected were: president, Dr. Charles A. Hodgette, Ottawa; vice-president, Dr. M. M. Seymour, Regina, Saskatchewan; Dr. I. W. C. McCullough, Toronto; Dr. G. B. Bayard Fisher, Fredericton; general secretary, Major Lorne Drum, and treasurer, Dr. G. D. Porter, Toronto. The next place of meeting is to be Toronto.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Dec. 16, 1911.

The Working Conditions of Telephonists

A circular of instructions to postoffice surveyors and heads of departments, covering the report of the committee of medical officers appointed to inquire into the working conditions of telephonists, has been issued as a parliamentary paper. In the opinion of the medical officers the work of telephonists is not in itself unduly trying to girls and women, provided that due care is taken to select candidates of suitable physique and temperament. The rule prohibiting all unnecessary noises in the switch-room should invariably be strictly observed. The head and breast gear should be personal to the operator, who should be permitted to wear it in the manner most comfortable to herself, consistent with efficient working, and where this is not done care should be taken in cleaning the gear. Steps are being taken to improve the construction and to reduce the weight of the receiver and transmitter, so as to render their removal unnecessary during working hours. The provision at large exchanges of sick-bays for the sole use of operators who may be temporarily indisposed and of rest or sitting rooms for operators who are off duty is recommended.

The Tsetse Fly and Game

A deputation representing eight missionary societies working in Nyassaland, Central Africa, waited on the Secretary for the Colonies and pointed out that the population of districts infected with sleeping-sickness were brought into contact with the inhabitants of a large area of Central and South Africa, thus increasing the risk of the spread of the disease and that evidence indicated that the tsetse fly fed on and was maintained by wild game. They thought therefore that the government was incurring great risks in the policy of preserving game. They pressed on the secretary the urgency of removing the restrictions on the hunting of game in Nyassaland. The secretary assured the deputation that he was ready to take every possible step on proof received, but the relation of the tsetse fly to game was obscure still. The British South Africa Company had sent out a scientific commission under Dr. Kinghorn and the government another commission under Sir David Bruce, at a cost of $25,000 a year. The deputation was asking him to prejudge the result of the commission. He objected to the use of the word "game" and preferred to use "fauna," which were being preserved for the sake of science, but if the evidence made clear the danger of any one species to the human race science must give way.

The "Victim of 200 Accidents"

A man, aged 37, pleaded guilty to obtaining money by false pretences from tradesmen. His method was most ingenious. He would fall down and claim to have been injured through the negligence of the persons whom he made his victims. His deception was favored by a malformed wrist which he represented as due to the accident. As he generally claimed only a modest amount his victims paid rather than fight the case, which even if they were successful, would have involved them in much greater cost. If the cases had come into court he would soon have been detected. As they did not the deception continued. During three years he successfully made about 200 such claims. He was arrested through playing the same trick on two butchers on the same morning, alleging that he had fallen on pieces of fat outside their shops. The fact that both at once sought the assistance of the Incorporated Society of Meat Traders led to detection of the fraud. A confederate accompanied him, making notes on his behalf of the incident with particulars of the name and address of those from whom the money was to be obtained. He was sentenced to eighteen months' hard labor.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Dec. 15, 1911.

Disturbances at the Paris Medical School—Discussion Over Professor Nicolas

The Council of the Université de Paris has just acted on the cases of the five students who participated in the recent disorders at the Faculté de médecine. One of these students was acquitted. The four others were suspended, one for six and three for three months. Moreover, in consequence of the persistent serious disorders at the anatomy course, the minister of public instruction, on the advice of the council of the Université de Paris, has decided to close the medical school for the students of the first and second year until Jan. 5, 1912. If, after the reopening of the school, there are fresh disorders in any part whatever the school will be closed until the end of the first semester of the school year and in any case the students will not be permitted to make up the time lost.

A group of former pupils of Professor Nicolas at the Faculté de médecine de Nancy—professors, physicians and interns of the hospitals—have just offered their testimony in favor of their old teacher. They declare that many practitioners who have benefited by his instruction and his indefatigable dévotion and who have now the necessary experience to judge a professor are moved to protest against the outbreaks which tend to discredit him in public opinion. The well-merited reputation which Professor Nicolas has acquired in France and abroad is moreover an irrefutable proof of his professional worth, and to this his appointment in the Université de Paris testifies further. The signers of this testimonial express the desire to see the speedy termination of a ridiculous campaign which can only produce serious injury to the prestige of the school and the real interests of the students.

Servetus' Study of Dissections

A passage in my letter of October 20 (THE JOURNAL, Nov. 11, 1911, p. 1627) surprises Dr. A. H. Burr of Chicago (THE JOURNAL, Nov. 18, 1911, p. 1713), who finds it strange that Prof. Charles Richet declared that Servetus had done no dissections. It goes without saying that, since I reported them, these were really Dr. Richet's words; and, moreover, five days after I dispatched my letter the same expressions were reproduced by the *Presse médicale* of October 25. With others, I can only share Dr. Burr's astonishment. The *Presse médicale* of December 29, for instance, publishes a letter from Dr. Léon Corral of Valladolid, who requests Professor Richet to state the grounds he has for thus revising this interesting point in the history of the unfortunate Spanish martyr. Professor Richet replies, "In saying that Michael Servetus had done no dissection, I exaggerated, but only slightly, for he cannot have done much dissection. It is indeed alleged that he studied anatomy as a pupil of Gunther, but for how short a time! He can have studied the cadaver only in the second half of 1535 and the first half of 1536; perhaps the whole year of 1536. It must be admitted that this is a short time in which to gain knowledge enough to reverse the doctrines of the masters and to establish what Vesalius himself, in spite of his long studies, was not able to ascertain, the non-perforation of the interventricular septum." M. Richet believes, moreover, that instead of diminishing the glory of Servetus, this fact increases it. In any case he considers Servetus' discovery—and he insists on this—as a veritable miracle.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Dec. 15, 1911.

Personal

Professor Uhthoff has accepted the call to succeed v. Michel in the chair of ophthalmology at Berlin.

State-Aided Insurance Against Sickness

According to the official statistics just published there were at the end of 1910 in the German empire 23,188 krankenkassen with 13,069,375 members. In the year 1910, 5,197,089 cases of sickness occurred among the members, amounting to 104,708,105 days of illness. The income amounted to $94,875,000 (379,500,000 marks) and the ordinary disbursements to $87,512,500 (350,500,000 marks). Among the latter is included the cost of illness, $80,000,000. The disbursement for illness included $19,100,000 for medical services, $12,050,000 for medicines and other remedies, $33,975,000 for sick money, $1,612,500 for the aid of pregnant and lying-in women, $1,875,000 for death benefits, $11,325,000 for hospital care and $50,000 for the care of convalescents. The expenses of management amounted to $5,100,000. The excess of assets over liabilities, i. e., the property of the krankenkassen, amounted to $74,100,000.

Further Reduction of Birth-Rate in Germany

From a summary by the imperial bureau of statistics we learn that the births for 1910, including still births, amounted to 1,982,836, as compared with 2,038,357 in 1909, and 2,076,660 in 1908. While the births fell in 1909 by 38,300 the reduction in 1910 was 55,000 more. For the first time since 1897 the number of births has fallen below two million. In 1910 there were 30.7 births per 1,000 inhabitants; the rate has never been so small in the last sixty years; it has been sinking for a long time after reaching its highest point in the seventies. From 1851 to 1860, the birth-rate for the present area of the German empire was 36.8 per 1,000 inhabitants, from 1861 to 1870, 38.8, from 1871 to 1880, 40.7 (with a maximum of 42.6 in the year 1876), from 1881 to 1890, 38.2, from 1891 to 1900, 37.4, from 1901 to 1910, 34.0. It is evident that the reduction in the last decade has been very marked. In 1908 the rate was 33, in 1909, 31.9. The rate of illegitimate births as compared with the entire number of births has been rising since 1903 following a previous fall; in 1903 there were in 100 births, 8.3 illegitimate, in 1909, 9 and in 1910, 9.1. With the reduction in births there has also been a reduction in deaths; in 1910 there were 1,103,723 as compared with 1,154,296 in 1909 and 1,197,098 in 1908. We have to go back to 1864 to find as low a number of deaths for the present area of the German empire. As compared with the population the mortality of 17.1 per 1,000 has never been so low as in the last year. In 1909 the rate was 18.1, in 1908, 19 and in the decade from 1901 to 1910 it was 19.5 as compared with 23.5, 26.5, 28.8, 28.4 and 27.8 in the preceding five decades. The natural increase of the population, that is, the excess of births over deaths amounted in 1910 to 879,113, as compared with 884,061 for 1909 and 879,562 for 1908 and shows in the last few years only a slight absolute increase. In comparison to the population it has undergone a slight reduction, being 13.6 per 1,000 persons as compared with 13.8 for 1909 and 14.0 for 1908. In the decade from 1901 to 1910 it amounted to 14.3 (with the maximum of 15.6 in the year 1902) as compared with 13.0, 11.7, 11.9, 10.3 and 9.0 with the previous decade. In spite of the reduction in births the increase in population in the last decade and also in the late years has been considerably higher than in the previous decade.

Issuing of Reprints for Advertising Purposes

The authorities in medicine have repeatedly protested against the distribution by manufacturers to the medical or lay public of medical articles containing pharmaceutical or other matter for advertising purposes. As a result the German medical press association (Deutsche medizinische Fachpresse) at its last general session took up this question and announced the following principles:

1. To hinder the unauthorized and uncontrollable reprinting of articles the editors are requested on the receipt of a manuscript to require a surrender of authorship rights. (According to Section 42 of the copyright law.)

2. There is no objection to a propaganda by special reprints, either in the interests of the author or of physicians and patients in case the following conditions are fulfilled:

3. The special reprint must be an unchanged reprinting of the original article. For advertising purposes single parts must not be made prominent by special type and no additions must be made or portions left out.

4. The distribution of reprints by an industrial firm may only be permitted on their promise not to allow distribution to the laity.

5. Special reprints furnished to a firm must not be used longer than to the end of the following calendar year without the renewed permission of the author. In order to secure the carrying out of this rule every special reprint shall bear the following printed statement on the title page: Distributed with the permission of the author until .....

It was further agreed: In case principles of this sort are finally adopted a formula must be determined on by the executive committee which all of the editors included in the association shall use when they inform an author that his article has been accepted for publication. With regard to the further treatment of these principles it was resolved: The executive committee is requested as soon as possible to inform the industrial association of the principles and request their opinion. The editors are then to be thoroughly informed as to the significance of the principles and requested as soon as possible to take up the matter with their publishers and to

secure an agreement with them by which the publishers shall promise to maintain the principles. As soon as this is accomplished a later meeting of the members, if necessary, a special meeting, shall reach a final conclusion.

Premature Publication of Medical Articles in the Daily Press

It has happened several times that the daily papers have published abstracts of articles from the medical press, even before they had appeared in the medical journal. This was especially the case in the early development of salvarsan therapy. In some cases it could be definitely assumed that the daily papers could only have become acquainted with the matter through the authors themselves. The general session of the German medical press association has consequently declared it not to be permissible to accept articles from authors who have communicated the substance of their articles to the daily press previous to their publication.

Prussian National Conference for the Protection of Infants

The first Prussian national conference for the protection of infants met in Berlin, December 9, and took up the subject of the organization of the homes for children in Prussia, with especial reference to regulations for infants and small children. Experience has shown that mortality among the children in homes is quite large, especially because they have usually to do with illegitimate children who are more endangered *per se* than the legitimate. In addition it has happened that such children are often badly treated and suffer in health as well as in their moral development. For some years attention has been called to this abuse by various parties, especially physicians and in different cities an organization of these institutions has been effected. The organization secured in Leipsic by Dr. Taube has served as a model. The meeting called here took up the question of securing a uniform organization for the whole of Prussia. The city physician of Halle, Professor v. Drigalski, read a report regarding the medical requirements in this field. According to him the establishment of offices for the care and instruction of helpless mothers and stations for receiving them with the child or for the child alone must be recognized as necessary. Such a bureau (*Fürsorgeamt*) aids the mother in her rights with reference to the father of the child by a professional guardian; it conducts the correspondence with other officials and care taking offices. All illegitimate births must be immediately reported to it, with the place where they occur. This office furnishes permission for the adoption of foster children and investigates the care taking stations. Fraudulent adoption requires special attention. Medical and nursing supervision of the resting women is secured by the care taking office. Changes in the care taking stations, deaths of foster children and unsuitable nursing places are reported to this office. The women inspectors, nurses and those in care of orphans, the assistants, the district, municipal and communal sisters, etc., work according to the local conditions, either for a salary (as in large cities) or voluntarily; in addition to these in the country districts single salaried nurses (district nurses) or several, paid for their special activity (midwives), cannot well be dispensed with. Also the physician must stand in a close relation by appointment (official or honorary) to the municipal or district authorities, and police supervisory authority must be conferred on him and on the nurses. A combination with other hygienic institutions (infancy, tuberculosis, inebriety) can only be effected where the assistance of the voluntary activity of women can be made available as in country districts, without too many patients with open tuberculosis. With an accumulation of tuberculous cases, as for instance in large cities, the nurses of orphans should not at the same time undertake the care of tuberculosis cases. Under like circumstances the medical control should not be simply left to a municipal infant's care station or one conducted by an association. On the other hand, it is very suitable that the conduct of the infant's care station should be committed to a pediatrician devoted to the care of foster children. The introduction of an inspection of corpses, at least for all small children, is to be sought for.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Dec. 12, 1911.

Personal

Professor Salzmann, for some years extraordinary professor of ophthalmology in the University of Vienna, has been appointed ordinary professor in this branch at Graz. He is a former assistant of Fuchs and is well known among the American colony in Vienna for the excellent work done in his English classes, both as regards diagnostic and laboratory work. Professor Chvostek, who only a few weeks ago had assumed charge of the fourth medical clinic, has been operated on for cholecystitis and is said to be progressing favorably. Also Professor von Neusser is said to be on the road to improvement, although it transpires that his kidney disease was malignant.

Decrease in the Number of School Children

The official municipal periodical *Amtsblatt der Stadt Wien* contains in its last issue an article on the decrease in the number of school children, from which the following interesting figures are taken: During the year 1900 there were born in Vienna 52,346 infants (31 per thousand inhabitants); in 1905 the figure was 49,538 (27 per thousand); in 1910 it stood at 42,336, or 22 per thousand. This year the number till October is already 1,000 less than for the corresponding part of last year. Although the death-rate has fallen too, this item offers no compensation. As regards the school children in Vienna, for the years 1908, 1909 and 1910, we find the following figures: 1908, 237,641 or 5,445 than in 107; for 1909 the figures were 241,180, an increase of 3,539; for 1910 they were 242,386, or 1,206 more than the previous year. For 1911, however, the figures are 240,870, showing 1,516 less than in 1910. A welcome feature about this phenomenon is that fewer pupils are allotted to each teacher (61 in 1891 against 49 at present) and that the air-space in the class-rooms is larger for each individual.

Dichotomy in Austria

The abuse known as dichotomy, or division of fees, has within the last few years been observed here in increasing frequency. The honest elements—it may be said safely that the overwhelming majority of our confrères justly claim this epithet—are brought into very unpleasant conditions by such disloyal methods. An action by the former president of the medical council was directed against such dishonest dealings, but its effect was practically nil. A private understanding among all surgeons, as well as among specialists, is now aimed at, so as to prevent in the future the existence of similar conditions. The sanatoriums are also urged to stop bribery— for it is nothing else—of the profession by offering a certain percentage to the doctor who sends a patient thereto.

An Unusual Accident

Some days ago a man was killed in an electric power station by touching two live wires with his head and left arm. He was penetrated by a current of 5,000 volts and was found dead soon afterward, while on the floor near his head were found a number of small pear-like rolls. The origin of these rolls was first discovered at the post-mortem table, one such roll being found lodged between the scorched, black bone of the skull and the ruptured dura mater. It was recognized that the current had melted or vaporized the bone, and that the pear-like rolls consisted of calcium phosphate, melted into balls by the enormous heat. Another remarkable finding was marked edema of the lungs and aspiration of stomach contents into the bronchi, showing that the injured man must have lived a short time after having touched the wire.

Marriages

I. HOPE ALEXANDER, M.D., Pittsburgh, to Miss Mabel Merrick Mendenhall of Mendenhall, Pa., at Philadelphia, December 21.

NORMAN SPEAR DUDLEY, M.D., Church Hill, Md., to Miss Clara Elizabeth Walls of Wilmington, Del., December 21.

JOHN FRANCIS LEWIS, M.D., Depue, Ill., to Miss Ida Samuelson of Princeton, Ill., at Ottawa, Ill., December 14.

CAPT. MAHLON ASHFORD, M. C., U. S. Army, to Miss Elizabeth Beale of Washington, D. C., December 20.

CONRAD F. SAYRE, M.D., Mason City, W. Va., to Miss Charlotte Burnell of Syracuse, O., December 23.

CHARLES GINSBERG, M.D., New York City, to Miss Mabel Goodman of Philadelphia, January 1.

JAMES ALBERT MORGAN, M.D., Philadelphia, to Miss Elsie Johnson of Media, Pa., December 20.

SAMUEL METCOFF, M.D., to Miss Ella Felicitas Rappaport, both of Chicago, December 31.

HENRY G. PIEPER, M.D., to Miss Ida C. McCullough, both of St. Louis, December 14.

MAX BIESENTHAL, M.D., to Miss Claudine Bacharach, both of Chicago, December 20.

Deaths

Joseph Edward Janvrin, M.D., a widely known specialist in gynecology and one of the founders of the International Congress of Gynecology and Obstetrics in 1893; died in Roosevelt Hospital, New York City, December 21, five days after an operation for appendicitis, aged 71. He was born in Exeter, N. H., and commenced his medical studies at the College of Physicians and Surgeons in New York City, but discontinued them to go to the front as assistant surgeon of the Fifteenth New Hampshire Volunteer Infantry. Later he completed his studies and was graduated in 1864. He located in New York City and began work at once in his chosen field of gynecology. From 1872 until 1882 he was assistant surgeon in the Woman's Hospital in the state of New York and since 1883 had been gynecologist and consulting surgeon to the New York Skin and Cancer Hospital and St. Elizabeth's Hospital, New York City, and consulting gynecologist to the Muhlenberg Hospital, Plainfield, N. J. He was a member of the American Medical Association for many years; president of the Americal Gynecological Society in 1902-1903; of the New York Obstetrical Society in 1890-1891, and of the New York County Medical Society in 1896-1897. Dr. Janvrin made many contributions to the literature of gynecology. Among those of special interest were the monographs on tubal pregnancy and carcinoma of the uterus.

LaFayette F. Rinkle, M.D. University of Michigan, Ann Arbor, 1874; Long Island College Hospital, Brooklyn, 1874; a member of the American Medical Association; died at his home in Boonville, N. Y., December 6, from heart disease, aged 60. At a special meeting of the Oneida County Medical Society, the committee appointed to prepare a tribute to Dr. Rinkle, reported the sorrow and regret of the members at the death of Dr. Rinkle, eulogizing him for his clean and useful life, his intelligence, his faculty of accurate observation and his willingness to sacrifice himself to the interests of his patients under all circumstances.

David Richard Wallace, M.D. New York University, New York City, 1854; surgeon in the Confederate service throughout the Civil War; one of the founders and an early president of the State Medical Association of Texas, and president of the Waco Medical Society; superintendent of the State Insane Hospital, Austin, from 1874 to 1879, and superintendent of the North Texas State Hospital, Terrell, from 1883 to 1891, and since that time a specialist on nervous and mental diseases; died at his home in Waco, November 22, aged 86.

Peter David Hughes, M.D. Fort Wayne (Ind.) College of Medicine, 1884; a member of the American Medical Association; clinical professor of surgery in the School of Medicine of the University of Kansas, Topeka, and the College of Physicians and Surgeons, Kansas City; founder and chief of the medical staff of Bethany Hospital; who was operated on in Rochester, Minn., in June last for abdominal disease; died at his home in Kansas City, Kan., December 11, aged 56.

Jephtha W. Harris, M.D. Tulane University, New Orleans, 1861; a member of the Florida Medical Association; assistant surgeon in the Confederate Army and later in the Confederate Navy during the Civil War; a member of the state legislature in 1877; superintendent of public instruction of Monroe County for ten years; collector of customs from 1855 to 1859; health officer of Key West for four years; died at his home in Key West, recently, aged 72.

Thomas D. Berry, M.D. University of Texas, Galveston, 1898; of Manor, Tex.; a member of the American Medical Association, and Association of Military Surgeons of the United States; from 1900 to 1907, an officer of the U. S. P. H. and M.-H. Service and on "waiting orders" since that time; died in the Austin Sanitarium, December 18, from the effects of a gunshot wound, accidentally received while hunting, aged 35.

Rhett Goode, M.D. University of Alabama, Mobile, 1871; dean and professor of anatomy and operative surgery in his alma mater; a member of the Medical Association of the State of Alabama, and president of the American Association of Railway Surgeons; health officer of Mobile, chief surgeon of the Mobile and Ohio, New Orleans, Mobile and Chicago, and Southern railroads; died in Mobile, December 23, aged 58.

Andrew Benedict Yard, M.D. College of Physicians and Surgeons, New York City, 1896; a member of the American Medical Association; a specialist in diseases of children and chief of the department of pediatrics in the Vanderbilt Clinic; died at his home in New York City, December 14, from appendicitis, aged 38.

William J. H. Bellamy, M.D. New York University, New York City, 1868; a member of the Medical Society of the State of North Carolina; formerly president of the New Hanover County Medical Society; one of the managers of the James Walker Memorial Hospital, Wilmington, N. C.; formerly a member of the State Board of Medical Examiners; died at his home in Wilmington, November 17.

William A. Atchison, M.D. University of Louisville, 1852; a member of the American Medical Association and one of the oldest physicians of Nashville, Tenn.; died at his home, December 18, from heart disease, aged 80. The honorary pallbearers included the officers and members of the Nashville Academy of Medicine, of which Dr. Atchison had been a member for many years.

Summerfield Berry Bond, M.D. University of Maryland, Baltimore, 1883; a member of the American Medical Association; for a time associate professor of genito-urinary diseases in his alma mater; chief medical examiner of the relief department of the Baltimore and Ohio Railroad; died at his home in Baltimore, December 21, from carcinoma of the liver, aged 50.

Josiah Bassett Trudgian, M.D. George Washington University, Washington, D. C., 1887; a member of the medical staff of the First District of Columbia Infantry, U. S. V. during the Spanish-American War, and later an employee of the Government Printing Office, Washington; died at his home in Washington, November 26, from angina pectoris, aged 55.

Homer Sanford Medford, M.D. George Washington University, Washington, D. C., 1895; a member of the Medical Association of the District of Columbia and until recently a member of the faculty of his alma mater, physician to the poor of the District; died in Providence Hospital, Washington, December 16, from typhoid fever, aged 38.

John Theodore Harding Slayter, M.D. University of Vermont, Burlington, 1885; contract surgeon U. S. Army and assistant surgeon U. S. V. during the Spanish-American War, and for seven years thereafter in the Philippine Islands; later a practitioner of Helena, Mont.; died at his home in Watertown, Mass., November 24, aged 49.

Thomas Sudler (license, Maryland); formerly sheriff of Queen Anne County; a member of the Baltimore City Council from 1889 to 1891 and thereafter an official of the health department until 1903 when he was appointed coroner of the Eastern District of Baltimore; died at his home in that city, November 14, from heart disease, aged 62.

James Wilson Hannum M.D. College of Physicians and Surgeons, New York City, 1877; a member of the American Medical Association; for several years president of the Ludlow (Mass.) Savings Bank; one of the founders of the Ludlow Hospital and first president of the Ludlow Hospital Society; died at his home, December 9, aged 60.

Ray F. Whetstone, M.D. Minneapolis College of Physicians and Surgeons, 1897; of Minneapolis; was killed in a collision between an express train on the Chicago, Milwaukee and St. Paul Railway, on which he was a passenger, and a special freight train running as a second section of the train, at Odessa, Minn., December 18, aged 39.

Bruno Jaehnig, M.D. University of Michigan, Ann Arbor, 1865; assistant surgeon of Volunteers during the Civil War; since 1869 a practitioner of Red Wing, Minn.; health officer of that city from 1898 to 1907, and physician to the State Training School since 1892; died at his home, December 22, from heart disease, aged 70.

Oswald A. Lett, M.D. University of Louisville, 1893; formerly a member of the American Medical Association and for several years a practitioner of Newburg, Ind.; died at his home in Corydon, Ky., December 11, from the effects of morphin, self-administered it is believed with suicidal intent while despondent, aged 43.

John Cole Graham, M.D. Western Reserve University, Cleveland, 1873; Bellevue Hospital Medical College, 1874; a member of the American Medical Association; for several years health officer of Laporte City, Ia., and local surgeon to the Rock Island system; died at his home, December 15, from heart disease, aged 61.

Eugene A. Curtis, M.D. Bennett Medical College, Chicago, 1873; formerly of Chicago, but for the last four years a resident of Dowagiac, Mich.; died in the Kalamazoo State Hospital, December 9, from pulmonary edema, aged 56.

Andrew Edmund Macdowell, M.D. New York University, New York City, 1849; since 1851 a practitioner of Galesburg, Ill.; died at his home in that city, December 15, from pneumonia, aged 86.

Dennis Patrick Wims, M.D. Dartmouth Medical School, Hanover, N. H., 1897; a member of the American Medical Association; demonstrator of anatomy in his alma mater; for fourteen years a practitioner of Providence; died in the Rhode Island Hospital, December 8, from pneumonia, aged 42.

Joseph Gaunt Edwards, M.D. Bellevue Hospital Medical College, 1878; a member of the American Medical Association; president of the Gloucester County (N. J.) Medical Society, and coroner of Gloucester County; died at his home in Williamstown, December 21, from heart disease, aged 62.

Reuben De Jernett, M.D. Medical College of Georgia, Augusta, 1857; division surgeon in the Confederate service during the Civil War, and later a practitioner of Jefferson, and Greenville, Tex.; died at the home of his son in Peniel, Tex., November 12, from senile debility, aged 87.

John Campbell Fleming, M.D. University of Michigan, Ann Arbor, 1880; of Shirleysburg, Pa.; a member of the Medical Society of the State of Pennsylvania and president of the Huntingdon County Medical Society; died during a surgical operation in Philadelphia, December 10, aged 60.

Nevin Blank Werst, M.D. Jefferson Medical College, 1902; formerly a member of the staff of Atlantic City (N. J.) Hospital, and later a practitioner of Egg Harbor City, N. J.; died at the home of his parents in Parkesie, Pa., December 2, from tuberculosis, aged 33.

Charles Fague Sterne, M.D. George Washington University, Washington, D. C., 1906; who entered the U. S. Navy in 1908 as assistant surgeon, lieutenant (junior grade); recently on duty with the Pacific Torpedo Fleet; died in Asheville, N. C., December 7, aged 31.

David Henson Coombs, M.D. Louisville (Ky.) Medical College, 1894; a member of the American Medical Association; one of the best known of the younger physicians of Southern Indiana; died at his home in Charlestown, December 8, from pneumonia, aged 41.

James Sumner Greene, M.D. Harvard Medical School, 1863; a member of the Massachusetts Medical Society; a veteran of the Civil War and for forty years a practitioner of Dorchester Lower Mills, Boston; died at his home, December 14, from pneumonia, aged 77.

George William Winterburn, M.D. Eclectic Medical College of the City of New York, 1875; of New York City; a medical editor and teacher in medical Colleges for several years; died in the New York Hospital, November 19, from cerebral hemorrhage, aged 66.

Charles J. C. Fischer, M.D. Washington University, St. Louis, 1877; a member of the American Medical Association and Mississippi Valley Medical Association; alderman, and in 1887, mayor of Carlinville, Ill.; died at his home, December 15, aged 57.

Fabius Julius Haywood, M.D. Bellevue Hospital Medical College, 1868; a member of the Medical Society of the State of North Carolina, and a Confederate veteran; died at his home in Raleigh, December 14, from cerebral hemorrhage, aged 71.

Benjamin B. Singletary, M.D. Tulane University, New Orleans, 1862; a Confederate veteran and for many years a practitioner of Port Vincent, La.; died at the home of his daughter in Prairieville, La., November 20, aged 74.

Jefferson Scoonover, M.D. College of Physicians and Surgeons, New York City, 1869; a veteran of the Civil War; postmaster of Greenville, Texas, for fourteen years; died at his home in Berkeley, Cal., November 14, aged 78.

Charles Barton Allen, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1881; local surgeon of the Burlington, Cedar Rapids and Northern Central Iowa railroads, at Morning Sun, Ia.; died at his home, December 13, aged 61.

John William Arnold, M.D. Central College of Physicians and Surgeons, Indianapolis, 1885; formerly of Shideler, Ind.; died in Sts. Mary and Elizabeth Hospital, Louisville, Ky., December 12, from pneumonia, aged 59.

William Rider Page, M.D. Rush Medical College, 1868; a veteran of the Civil War and for many years a practitioner of Washington, D. C.; died at his home in that city, November 26, from valvular heart disease, aged 65.

Henry Clary Hart, M.D. University of Louisville, Ky., 1865; for many years a member of the Winchester Board of Education; died at his home in Winchester, Ky., December 11.

Lucius Deyampert Webb, M.D. New York University, New York City, 1870; died at his home in Greensboro, Ala., December 1, aged 64.

Sylvester S. Smith, M.D. Rush Medical College, 1869; a member of the Medical Society of the State of Pennsylvania and formerly coroner of Cameron County; died at his home in Emporium, November 22, aged 66.

Oscar Lyndon, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1899, of Athens, Ga.; visiting surgeon to the Hospital for Incurables, at that place; died in Atlanta, November 19, from heart disease, aged 35.

William H. Willett, M.D. Vanderbilt University, Nashville, Tenn., 1891; of Adams, Tenn.; formerly an attorney; a veteran of the Civil War; died at an infirmary in Nashville, December 6, aged 70.

John Warren Thorp, M.D. New York University, New York City, 1871; a member of the American Medical Association; died at his home in Oxford, N. Y., December 15, from pneumonia, aged 72.

Joseph V. Milton, M.D. University of Maryland, Baltimore, 1901; of Hamilton, Va.; a member of the Medical Society of Virginia; died in Harrisonburg, Va., December 16, from pneumonia, aged 35.

Bisland Shields, M.D. Tulane University, New Orleans, 1860; a member of the Jefferson County (Miss.) Medical Society; died at his home in Church Hill, October 7, from gastritis, aged 73.

John Walter Flatley, M.D. Jefferson Medical College, 1903; physician to the out-patient department of Jefferson Hospital; died at his home in Philadelphia, December 12, from pneumonia, aged 30.

Jens P. Sonnickson, M.D. Medical College of Ohio, Cincinnati, 1875; for many years a practitioner of Blair and Whitehall, Wis.; died at his old home in Christiania, Norway, October 22, aged 76.

George W. Roberson, M.D. Bellevue Hospital Medical College, 1893; a member of the Medical Association of Georgia; formerly of Louisville; died at his home in Macon, December 7, aged 42.

O. E. Bingham, M.D. New York Homeopathic Medical College, New York City, 1867; of Omaha; died at the home of his daughter in Lincoln, Neb., December 11, from pneumonia, aged 85.

Asa Dennis Smith, M.D. Boston University, School of Medicine, 1877; a veteran of the Civil War; died at his home in Dorchester, Boston, November 26, from heart disease, aged 76.

Fairfield Snyder, M.D. University of Buffalo (N. Y.), 1872; of Corunna, Ind.; died in the Richmond State Hospital, November 10, from cerebral hemorrhage, aged 64.

George Wellesley Gates, M.D. Harvard Medical School, 1884; a member of the American Medical Association; of Los Angeles, Cal.; died at Pomona, Cal., December 13.

John W. Edwards, M.D. University of Louisville, Ky., 1889; formerly of Courtland, Ala.; died at his home near Hillsboro, Ala., recently, from heart disease, aged 66.

John A. Callen, M.D. Homeopathic Medical College of Missouri, St. Louis, 1875; died at his home in Auburn, Cal., December 7, from pneumonia, aged 72.

William Fenton Millington, M.D. New York University, New York City, 1877; died at his home in South Brooklyn, N. Y., December 15, from nephritis, aged 56.

Frederick Charles Kyser, M.D. Eclectic Medical Institute, Cincinnati, 1905; died at his home in Grenola, Kan., December 3, from cerebral hemorrhage, aged 42.

Reuben Harrison Smith, M.D. University of Louisville (Ky.), 1860; died at his home in Fort Worth, Texas, November 3, from nephritis, aged 76.

Jacob R. Armstrong (license, Iowa, practitioner, 1886); a veteran of the Civil War; died at his home in Irvington, December 4, aged 63.

John Wesley Moore, M.D. Cincinnati Physio-Medical College, 1874; died at his home in Mexico, Ind., December 11, from tuberculosis, aged 63.

Robert J. Coffman, M.D. Hospital College of Medicine, Louisville, 1876; died at his home in Whiteville, Tenn., December 10, aged 62.

Alonzo F. Harris, M.D. Jefferson Medical College, 1860; died at his home in Opp, Ala., December 7, from senile debility, aged 71.

Alfred Gilmore Young, M.D. Jefferson Medical College, 1874; died at his home in Wilkinsburg, Pa., November 26, aged 63.

Sarah E. Wisner, M.D. Hahnemann Medical College, Chicago, 1876; died at her home in Sharon, Kan., October 7, aged 64.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

SURGERY, GYNECOLOGY AND OBSTETRICS

A Medical Periodical that is to be Clean from Cover to Cover

Two weeks ago, we commented editorially on the discouraging fact that the editor of a certain high-class surgical journal claimed to be unable to distinguish between proprietaries that have been shown to be fraudulently exploited, and those of presumable value that are advertised honestly. That the difference is recognized and understood by some editors is evident from the admirable letter which we are about to reproduce.

This letter has been sent out to a number of physicians over the country by the managing editor of *Surgery, Gynecology and Obstetrics*, a journal whose reading pages have always been high-class and whose advertising pages, while not free from criticism, have been far in advance of those of the average medical journal.

As will be seen by the letter, the editor recognizes the impossibility of any one man being able to determine whether or not certain proprietaries are worthy or unworthy additions to therapeutics.

The American Medical Association recognized the same fact when it brought into existence the Council on Pharmacy and Chemistry for the purpose of subjecting to expert examination the various proprietary remedies on the American market. After Dec. 31, 1911, *Surgery, Gynecology and Obstetrics* will advertise no proprietary remedies that have not been examined and approved by the Council on Pharmacy and Chemistry.

The letter, announcing this fact, follows:

DEC. 20, 1911.

My Dear Doctor:—It may interest you to know that *Surgery, Gynecology and Obstetrics*, beginning with the January, 1912, issue, will be guided in its acceptance of advertising of pharmaceutical preparations by the rulings of the Council on Pharmacy and Chemistry of the American Medical Association.

For several years I have been attempting to regulate my advertising on my own arbitrary standards, and from time to time have refused or dropped the more objectionable advertisements. It has been difficult, however, to solve the intricacies of the problem and to adopt an arbitrary and independent standard; therefore, for the future, I have concluded to adopt the standard of the Council on Pharmacy.

Six months ago, after an interview with Dr. Simmons, at which time I was particularly impressed with his great work, I instructed Mr. A. D. Ballou, our advertising manager, to terminate all existing contracts inconsistent with the above policy and to institute the reform with the January, 1912, issue.

In accordance with this policy, the following advertisements will be terminated with our December, 1911, number:

Bovinine, Pepto-Mangan (Gude), Fellow's Syrup of Hypophosphytes, Listerine, Glycothymoline, Gray's Glycerine Tonic, Ergoapiol, Glycoheroin, Antiphlogistine, Cytone.

Yours very truly, FRANKLIN H. MARTIN, Managing Editor.
31 North State Street, Chicago.

PARTNERS

CONVICTIONS UNDER THE FOOD AND DRUGS ACT

More Frauds Exposed by the Bureau of Chemistry

Since the last series of abstracts of Notices of Judgment against "patent medicine" frauds appeared in THE JOURNAL the following have been issued:

SWEET'S HONEY VERMIFUGE

The Van Vleet-Mansfield Drug Company of Memphis, Tenn., sold a product which it claimed was "a dead shot for worms." It called its nostrum Sweet's Honey Vermifuge and sold it as a "perfectly harmless" preparation for children. While the name would naturally give the impression that Sweet's Honey Vermifuge contained some honey, no honey could be found in it. Instead the federal chemist declared that it contained the following drugs:

Santonin	Sodium salts
Senna	Sugar
Methyl salicylate	Alcohol
Water	Coloring matter

The stuff was declared misbranded because of false and misleading statements regarding the quantity of alcohol, because it contained no honey and, further, because any preparation containing santonin is not "perfectly harmless" especially for children. The manufacturer pleaded guilty and was fined $10.—[*Notice of Judgment No. 1113.*]

DR. TOWNS' EPILEPSY CURE

The Dr. Towns' Medical Company of Fond du Lac, Wisconsin, is one of the numerous epilepsy cure fakers. It is advertised by methods common to concerns of that type. Towns sends out a leaflet giving what he calls an "endorsement" of his nostrum "from the highest authority known." The "highest authority" referred to is Willard H. Morse, M.D., F.S.Sc. (Lond.). Morse seems to make a practice of furnishing write-ups for quacks and medical fakers and, consistently enough, he is a "fellow" of that serio-comic humbug, the "Society of Science, Letters and Art" of London. These fellowships cost $5.00. Towns also publishes an "editorial" entitled "Plain Truth About Proprietary Remedies" from the *American Journal of Health*. It is, of course, laudatory of Towns' remedy. Such "editorial" endorsement means little to those who know that the *American Journal of Health* was a publication that would endorse any fake or quack that would pay the price. When the Epileptic Institute Company of Cincinnati was put out of business by the government, the proprietor of this fraud said that his concern purchased the names of possible victims from Dr. Towns of Fond du Lac, Wis. (see "Nostrums and Quackery," page 295).

Towns' nostrum was analyzed by the federal chemists who reported it to consist of:

1. A watery solution of ammonium bromid and sodium chlorid (salt) with valerian, flavored and sweetened.
2. A sugar-coated pill of sulphonal mixed with talcum and tolu.
3. Black pills composed of charcoal, sugar, phosphorus and inorganic matter, with a small amount of strychnin-bearing material.

The stuff was declared misbranded because of the ridiculously false claim that it would "cure" epilepsy. The case was brought to trial before the Supreme Court had decided that lies such as Towns printed were not contrary to the

spirit of the Food and Drugs Act. Towns pleaded guilty and was fined $25.—[*Notice of Judgment, No. 1170.*]

DIXIE FEVER AND PAIN POWDER

These "headache powders" were prepared and sold by the Morris-Morton Drug Co., Fort Smith, Ark. The following claims were made for them:

"Useful in all cases of fever to lower the temperature and relieve pain."

"A positive and immediate relief for headache, neuralgia, catarrh, la grippe, cold in the head, rheumatism, sleeplessness, and all nervous conditions."

"It relieves all pains in the Head, Face and Body, which are caused by Cold, La Grippe, Neuralgia, Exposure or Dissipation."

"If suffering from periodical attacks of the above troubles (Headache, Neuralgia, La Grippe, Cold in Head, Earache, Toothache, Pains over Eyes, Rheumatism), they will grow less frequent and less severe by using these powders."

"For Insomnia or Sleeplessness, one powder taken on going to bed will produce a natural and healthy sleep."

As these claims were severally and individually false and misleading the nostrum was declared misbranded. The company pleaded guilty and was fined $10.—[*Notice of Judgment, No. 1178.*]

STELLO'S ASTHMA CURE

Stello's Asthma Cure was a product of one W. H. Muller, New York City, and was sold under the following preposterous claims:

"It is entirely vegetable."
"Everyone is promised a cure."
"A permanent cure is assured to all."
"A proven radical and permanent cure."

This "entirely vegetable" product was found to contain, according to the government chemists, the following drugs:

Potassium Iodid	Cannabis Indica
Glycerin	Alcohol

It was declared misbranded because the quantities and proportions of cannabis indica and of alcohol were not stated on the label. Muller pleaded guilty and was fined $50.—[*Notice of Judgment, No. 1179.*]

Correspondence

Rural Sanitation Again

To the Editor:—I was very much interested in the editorial (THE JOURNAL, Oct. 7, 1911, p. 1214) on sanitation in rural districts and the letter elicited by it from Dr. Dorety (THE JOURNAL, Oct. 28, 1911, p. 1473). I have for the past few years been secretary of the territorial board of health in a territory having no large cities, and the problem of the small town and the village has been of particular interest to me. I wish what I say to be understood as applying only to that part of a state lying outside towns of 50,000 or more inhabitants.

In my opinion, the divorcement of public health work from private practice (or other interests) is quite as important as its divorcement from politics. Accepting this premise, it follows that in order to obtain competent full-time men, with the consequent increases in salaries, the local taxes must be increased or the sanitary unit must be enlarged to include several counties. The latter should, on account of its economy, be more acceptable.

This enlargement of the area of the sanitary unit necessitates either the cooperation of the constituent counties in the matter of raising funds for the assumption of this function by the state. The latter would be much the simpler and, aside from eliminating local disputes over pro rated expenses, would render possible the coordination of the public health work of the state. It would also, presumably, avoid any constitutional difficulties, and some promise of promotion might be held up as an incentive for those in less important districts. I feel quite certain that direct *control* by the state department should result in far greater efficiency than does *supervision*. That has been the experience with the registration of vital statistics and the cases seem analogous. The counties or towns should bear the expenses of quarantines, but these can be maintained quite as effectively by the police or a lay inspector if supervised by a qualified superior.

Essentials of rural sanitation are pure water-supplies and sewerage. These also make cooperation desirable if not necessary. Many small places could afford public water-supply systems if it were possible for them to incorporate without the necessity of burdening themselves with the expense of an ordinary town government, and if they could compel all households of the corporation to connect with the system. By permitting the incorporation of such sanitary areas, by having at their service a state sanitary engineer to advise, and by having a state health department to educate the people to take advantage of their opportunities, most of the defects of rural sanitation would be eliminated. As stated in the above-mentioned editorial, most of the sanitary advances have been made in the cities. (The vital statistics of the registration area show a practically straight line for the rural death-rate from 1900 to 1908.) It is seemingly necessary, therefore, that the methods of the city should be adopted in the country, and not the least among these methods is the character of the public health organization.

The cities have largely done away with their boards of health and substituted departments under control of commissioners, with the employees under civil service rules. Executives are employed for executive work, technicians for technical work, clerks for clerical work and laymen for lay work. That is the logical way, and, if local control be abolished and the state properly districted, I think it is applicable to the rural areas of our states.

EDWARD S. GODFREY, JR., Phoenix, Ariz.

Loose-Leaf Medical Books

To the Editor:—Those of us in moderate circumstances find it a considerable drain on our resources to keep our libraries up to date. For instance, a work on practice composed of several volumes necessitates quite an outlay, and it is a hardship under present conditions to pay for a work of this kind when in five or six years it will be obsolete. I have wondered why some publisher has not issued this class of books in loose-leaf bindings, selling them on the condition of keeping them revised up to date by issuing new loose leaves when necessary, these to be slipped into place and the old leaves to be removed. Of course, this would call for a greater initial cost and a yearly assessment for keeping the work revised but it would be cheaper in the end, and we would have a work up to date as long as the assessment was kept paid. I think that there is none of us who would not be glad to pay more to have the satisfaction of knowing we were buying something that could be used permanently.

C. M. CHILTON, Gunnison, Miss.

Subnitrate of Bismuth in Pruritus Ani

To the Editor:—In your Therapeutic Department of THE JOURNAL for December 30, p. 2138, I noticed an article on pruritus ani, in which a variety of remedies were mentioned, all undoubtedly good in conditions named, but I failed to see mention of one application which has always been a favorite with me, especially in such cases as are associated with an excess of moisture about the anal region, and where a due attention is not paid to absolute cleanliness of the parts. My remedy is subnitrate of bismuth, and is used as follows: After thoroughly cleansing the surface with water, and a bland soap if necessary, I follow with a weak solution of phenol (carbolic acid) and dry thoroughly. I then take a square piece of gauze, one thickness only, about 4 or 5 inches square, lay it on the table and put 1 or 2 ounces of bismuth in the center, gather the edges together and tie in such manner as to make a loose bag, and direct the patient to "spat" the surface freely, while in squatting position, until the skin is thoroughly dusted over, this dusting to be repeated as often as

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the part becomes moist enough for more to adhere, but the washing only once a day or after defecation.

Many old men are greatly annoyed by fast accumulating smegma under the prepuce, if long enough to cover the glans, and if not often cleaned away it becomes offensive and produces the condition of balanitis and extreme discomfort. If the above treatment is made use of in such cases prompt and permanent relief is most positive.

G. W. JOHNSON, Savanna, Ill.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE COMPOSITION OF BAKING-POWDER

To the Editor:—1. What is a good formula for the compounding of non-injurious, efficient baking-powder?
2. What harmful substances are present in baking-powders now on the market? L. L.

ANSWER.—1. In general, baking-powders consist of a carbonate or bicarbonate from which carbon dioxid is liberated by the action of a second substance, the so-called "acid" ingredient, when the powder comes in contact with moisture. For the carbonate, sodium bicarbonate (baking soda) is used and for the acid constituent one of three substances is used, viz., (1) potassium acid tartrate (cream of tartar), (2) calcium acid phosphate, and (3) potassium aluminum sulphate (potash alum) or ammonium aluminum sulphate (ammonia alum). Baking-powders containing tartrate introduce sodium potassium tartrate into the bread; those containing phosphate introduce calcium phosphate and sodium phosphate; and those containing alum introduce aluminum hydrate, sodium sulphate and either potassium or ammonium sulphate, according to whether potassium or ammonium alum was used. Considerable has been written on these residual substances left in bread by baking-powders, and especially, pro and con, regarding the harmfulness of alum; but up to the present, the question is still an open one, although alum is either prohibited or required to be especially declared on labels in some states.

In Bulletin 13, Bureau of Chemistry, Department of Agriculture, formulas are given for preparing efficient and harmless baking-powders. The following is the formula for the powder containing the greatest amount of available carbon dioxid:

"Cream of tartar	6 ounces.
Baking-soda	3 ounces.
Corn-starch	1 ounce."

In commenting on the home manufacture of baking-powder, the bulletin directed attention to three requirements, viz., (1) purity of ingredients, (2) dryness of ingredients and (3) thorough mixing. If pure ingredients be purchased and these, with the exception of the baking-soda, be thoroughly dried, at a temperature of 221 F. (105 C) if possible, the chief obstacles to successful manufacture of baking-powder are removed.

2. Out of over 1,000 judgments issued by the government against adulterated foods and drugs only four were issued against baking-powders, and these on account of short weight. As was mentioned above, some evidence has been brought forward which indicates that alum is an undesirable and harmful constituent of baking-powder, but until more thorough investigations have been made, nothing more definite can be said.

THE WORDS SECRETE AND EXCRETE

To the Editor:—I wish to call attention to an error in expression in the editorial on "The Edema of Nephritis" (THE JOURNAL, Dec. 16, 1911, p. 1998). In speaking of the immediate cause of nephritic edemas you ask: "Is the inability of the kidneys to secrete water the fundamental feature, or their inability to secrete salts?" As the kidneys are organs of excretion and their products excretions, not secretions, the term "to secrete" is here decidedly incorrect. The correct term is to excrete. M. LEON, M.D., Mount Olive, Ill.

ANSWER.—We are glad to find that our pages are watched carefully, especially by persons who seek to use the English language with precision. It happens, however, that we used the term "secrete" in the editorial intentionally, desiring to avoid conveying the idea of throwing off involved in "excrete." It is, of course, to be regretted if in so doing we have caused confusion in the minds of any of our readers, but the justification for our use of the term is as follows: The kidneys cannot excrete until they have first secreted—using the verb in its primary meaning, "to separate from the blood-stream." Any up-to-date text-book of physiology will substantiate this use. For example, in Howell's work one may read about secretion of urine in the chapter on the kidney as an excretory organ. It is true that when the nouns "secretion" and "excretion" are applied to products instead of processes, the latter refers exclusively to products which ought to be thrown off, and the former usually to products which are of use in the animal economy. Hence it is natural, though not inevitable, to associate the corresponding verbs with the products so named, as our correspondent has done.

BEE-STINGS AND RHEUMATISM

To the Editor:—Please let me know the latest results obtained from using bee-stings hypodermatically for rheumatism.

H. G. WILLSON, M.D., Gallup, N. Mex.

ANSWER.—We presume that our correspondent refers to the practice of permitting bees to sting the patient. Some apparently remarkable results are reported in individual cases from this application, but the number of trials has been so small that some doubt may be entertained as to whether the benefits are to be ascribed to anything else than psychic influence or the idiosyncrasy of the patient.

The following articles may be referred to:

Walker, E. W. A.: Bee-Stings and Rheumatism, *Brit. Med. Jour.*, Oct. 10, 1908; abstr. in THE JOURNAL, Nov. 7, 1908, p. 1644.
Maberly, F. H.: The Treatment of Rheumatism by Bee-Stings, *Lancet*, London, July 23, 1910; abstr. in THE JOURNAL, Aug. 20, 1910, p. 721.
Knoot, J.: Bee-Sting Treatment of Rheumatism, *Med. Press and Circular*, Sept. 28, 1910, p. 333.

HAIR'S ASTHMA CURE

To the Editor:—I have been asked for information regarding a "patent medicine" called Hair's asthma cure. Are the constituents of this compound known? R. R.

ANSWER.—Hair's Asthma Cure was analyzed by the federal chemists and its exploiters were convicted of misbranding under the Food and Drugs Act. A report of this conviction, together with the analysis, appeared in THE JOURNAL, June 24, 1911, page 1898, and the matter has been reprinted in "Nostrums and Quackery," page 406.

REPORT OF A CASE OF ACCUMULATION OF NUTSHELLS IN THE RECTUM

To the Editor:—A girl, aged 9, ate some hickory-nuts, swallowing not only the meats but also the shells. The mother gave the child castor oil on the night before I was called. When I reached there I found the child screaming with pain, trying to pass the nut-shells. I found the external sphincter of the rectum partially dilated and some shells protruding. The rectum was dilated and impacted with shells. An anesthetic was given, the sphincter dilated and rectum irrigated, and one-half pint of shells of various sizes was removed. The following morning the operation had to be repeated and an equal amount removed, after which procedure the child made an uneventful recovery and promised never to eat hickory-nut shells again. H. A. THOMAS, M.D., Lake View, Ohio.

The Public Service

Medical Corps, U. S. Navy

Changes during the week ended Dec. 30, 1911.

Johnson, M. K., surgeon, detached from the *Tennessee* and ordered home to await orders.

Carpenter, D. N., surgeon, detached from the naval academy and ordered to the *Kansas*.

Winn, C. K., P. A. surgeon, detached from the *Mississippi* and ordered to the *Dixie*.

Steadman, W. G., P. A. surgeon, detached from the *Dixie* and ordered to the *Kansas*.

Mann, W. L., P. A. surgeon, detached from the *Hannibal*, January 4, and ordered to the naval hospital, Boston, for treatment.

Robnett, A. H., P. A. surgeon, detached from the *Missouri* and ordered to the *Culgoa*.

Stoops, R. E., P. A. surgeon, detached from the *Culgoa* and ordered home to await orders.

McDonell, W. N., P. A. surgeon, detached from the *Kansas* and ordered to the *Tennessee*.

Stuart, D. D. V., asst. surgeon, detached from the *Idaho* and ordered to the *Hannibal*.

Longabaugh, R. L., P. A. surgeon, detached from the navy recruiting station, Des Moines, Iowa, and ordered to duty at the naval hospital, New York.

Pollard, J. B., asst. surgeon, detached from the naval hospital, New York, and ordered to the navy recruiting station, Des Moines, Iowa.

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Medical Department, U. S. Army

Changes for the week ended Dec. 30, 1911.

Stallman, George E., dental surgeon, reports arrival at Fort Bliss, Tex., for temporary duty.

Feely, James F., acting dental surgeon, reports for duty at Fort Hamilton, N. Y. Left Fort Slocum, N. Y., same date.

McCord, Donald P., M.R.C., relieved from duty at Fort George Wright, Wash., and ordered to Fort William Henry Harrison, Mont., for duty.

Slater, Ernest F., M.R.C., leave of absence extended ten days.

Barber, John R., captain, ordered to Letterman General Hospital, San Francisco, for duty.

Morse, Arthur W., major, ordered to Fort Morgan, Ala., for duty.

Wilson, James A., lieut., ordered to Fort Slocum, N. Y., for duty.

McKinney, Garfield L., captain, relieved from duty at the Letterman General Hospital, San Francisco, and ordered to Fort Caswell, N. C., for duty.

Allen, William H., lieut., relieved from duty at Fort Slocum, N. Y., and ordered to the Army and Navy General Hospital, Hot Springs, Ark., for observation and treatment; thence to Fort Sam Houston, Tex., for duty.

Brown, Henry L., captain, relieved from duty at Fort Morgan, Ala., and ordered to Fort Slocum, N. Y., for duty.

Lyle, Charles, major, ordered to New York City and Poughkeepsie, N. Y., on official business pertaining to the American National Red Cross.

Napier, Edward L., lieut., ordered to temporary duty as surgeon, Transport *Sheridan*, during voyage to Manila, P. I., and on arrival at Manila to report for assignment to duty in the Philippines division.

Worthington, Joseph A., captain, orders assigning him to temporary duty as surgeon of the Transport *Sheridan* is revoked.

Carswell, R. L., captain, is detailed for duty in the bureau of navigation, Philippine Islands, relieving Captain Philip W. Huntington, medical corps.

Maguire, Daniel F., lieut., leave of absence extended twenty days.

Maynard, Edwin B., M.R.C., granted two months' leave of absence.

Borden, William B., M.R.C., orders to the Philippine Islands is revoked.

Miscellany

Symptoms Bred by the Medical Examination.—Bernheim in France and Buttersack in Germany have recently been emphasizing anew the danger of suggesting symptoms to the patient in making the examination. They also comment on the frequently striking similarity in the symptoms recorded at the individual clinics, the mode of examination suggesting a train of symptoms which are not encountered at other clinics. The Charcot syndrome of hysteria is a striking example of this suggestive endemic; the patients were educated into it, they think, by the routine method of examination. Instead of going directly to McBurney's point, for example, Bernheim has the patient palpate his abdomen himself, and discover casually the local pain at the typical point. Or Bernheim does the palpating, but commences on the side and works gradually over to the point. He auscults the heart from the rear, as much as possible, letting the patient think it is the lungs he is examining. Under all conditions he strives to divert the patient's attention from the examination, asking him about conditions in regard to urination, vision, pains in neighboring joints, etc. Disturbances in coordination can be best studied when the patient is asked to jump or do other gymnastic exercises for the alleged purpose of estimating their effect on the heart. The physician must bear in mind that the more zealously he seeks to elicit tenderness or defective functioning at a given point, the more zealously the patient will strive to feel pain there or impairment of function. Buttersack is particularly careful to refrain from attracting attention to the heart in cases of acute articular rheumatism, refraining from ausculting it much or referring to the heart in any way. He adds that it is astonishing how much the practiced eye can discern in regard to the heart action, without direct auscultation. Disturbances in the circulation can be detected more readily and more accurately by the trained eye than with the stethoscope, he declares; the latter is liable to give misleading impressions unless the auscultation findings are controlled and interpreted by the clinical eye. His article on the physician as an etiologic factor was published in the *Fortschritte der Medizin*, 1911, xxix, 1057.

Observation Plus Thinking.—Hippocrates looked at patients with keen eyes and a clear brain, and, as a product of his period, when the nature of Nature began to be recognized, he could not but deduce from his observations the naturalness of disease—that it was not an entity apart from man, but a part of man himself. And this was the great contribution of the Greeks, who first taught us to look with the seeing eye at disease. Observation plus thinking has given us the vast stores of knowledge we now possess of the structure of the bodies of living creatures in health and disease. There have been two inherent difficulties—to get men to see straight and to get men to think clearly; but in spite of the frailty of the instrument, the method has been one of the most powerful ever placed in the hands of man. It gave us Vesalius and the new anatomy, Newton and a new universe, Morgagni and the new morbid anatomy, Laennec and the new medicine, Virchow and the new pathology, Darwin and a new outlook for man on the world.—Osler in *Glasgow Med. Jour.*

Small Doses of Thymol for Hookworm.—In extra severe cases of hookworm infection, with a patient in a much weakened condition, Stiles has found that the usual method of giving thymol may be modified to some extent. Instead of giving a preliminary dose of magnesium sulphate, none is given, and, depending on the condition of the patient, a small dose (10 gr. or somewhat more) of thymol is given and this is repeated one or two or three times at intervals, the patient in the meantime gaining strength. Some of the hookworms are thus eliminated, and when the patient has gained sufficient strength, if necessary, the usual routine is carried out and the full dose given. By this method the element of safety for the patient is increased to the maximum by treating along very conservative lines.—*Public Health Reports.*

Psychoses from Chronic Ergot Poisoning.—A Russian journal reports seventeen cases of psychoses from this cause with necropsy in some of the cases. There did not seem to be any characteristic somatic feature of the ergot psychoses. The knee-jerk was variable, as also the sensory phenomena; exaggerated muscular excitability was more constant. As a rule the milder psychoses were not accompanied by any physical symptoms and in the severer cases the syndrome resembled actual tabes. The main cerebral features of the ergot psychoses were disturbances in consciousness and the emotional sphere, with more or less intellectual weakness and apathy. The report is by M. J. Gurewitsch and is summarized in the *St. Petersburg. med. Wochenschrift*, 1911, xxxvi, 434.

Life on a Physico-Chemical Basis.—Until comparatively recent times the processes going on in living plants and animals had been so little studied that the idea of life being dependent on external conditions was entertained by very few men. With the development of modern physics and chemistry, and with the application of the methods as well as of the results of these sciences to the study of living things, this idea rapidly spread, until it is now pretty generally accepted. Moreover, the strong tendency during the past two generations to unify all knowledge, and to extend the principles of one science to the problems of all others, have stimulated the search for the physical and chemical foundations for "vital" processes.—B. C. Gruenberg in *Scientific American.*

Scientific Inquiry.—The process of scientific inquiry, says Professor Cannon in *Science*, involves peculiar qualifications which cannot be disregarded by any one who thinks of trying it. Research implies in the first place seeking again over a region which has been previously traversed, in order to learn what other men have done and the point where their labors ended. To make progress sure, therefore, previous records must be carefully studied. The failure to pay this just tribute to those who have labored before, has not seldom led to fruitless effort or to vain repetition of work already well done. Marking the boundaries demands, then, a scholarly acquaintance with earlier discoveries, and the painstaking methods of the scholar must be used.

Public Health.—The servant of the public health is working on the lives of men and should be laying the foundation of national prosperity and happiness. He belongs to an order of sanitary priests and belies his vocation and destroys his trust if he does not use the material at his disposal fully and faithfully. He will reject no method of labor and spare no endeavor which offers the prospect of increased power over disease.—Newsholme.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE GOVERNOR OF NORTH CAROLINA AND PUBLIC HEALTH

Last week we quoted,[1] from the *Bulletin of the North Carolina Board of Health*, the report of the Buncombe County Medical Society, as an example for other county societies to follow. In the same number of the *Bulletin* (December, 1911) appeared an article by Governor Kitchin, on "The State's Duty to Public Health," in which the public health work of the state is discussed from the standpoint of an executive and a layman. The example of the governor is as worthy of imitation as is that of the Buncombe County Medical Society. Would that the governors of all of our states were as well informed and as interested in public health as is Governor Kitchin! The time will come when a record of sanitary administration and reduction of the death-rate during an executive officer's term of service will be regarded as the finest kind of political capital. In the meantime, North Carolina is to be congratulated in having such a man as its governor. Governor Kitchin said:

"The debt which humanity owes medical science is inestimable. The members of the medical profession not only by their daily ministrations relieve suffering and restore health, but by the most diligent and laborious scientific research they are locating the unseen enemies of man—more deadly than all the armies of the earth—and year by year they are conquering them. They are steadily lengthening the term of human life by more skilful treatment and scientific prevention of disease.

"Aside from the humane feature, the economic value of this work is incalculable. To aid and encourage the application of this scientific knowledge to the daily life of the people is a proper function of government, and what the state is doing in this direction cannot be too highly commended. Without such action by the state and without the hearty cooperation of the profession throughout the state we cannot fittingly take advantage of the discoveries of science.

"I rejoice to know that in this administration the state has marked its farthest advance in care for the public health, and to think that more and more of the state's wealth and power will be devoted to this great object. The money and energy expended for public health benefits all. It benefits even the wealthy and the well-to-do, who can, in a measure at least, protect themselves by change of locality and control of local conditions; but it benefits most the poor who are unable to protect themselves and their little ones. He who stays the hand of disease and death at poverty's door helps to drive away the wolf and closes the way to the orphan's home. He is indeed a benefactor to humanity.

"When I have visited the orphans' homes and looked into the faces of those in whose tiny lives the light of parental love has been quenched, and have considered that they are but a few of the vast army scattered throughout the state, and have realized that probably two out of five have been mustered into this army by disease which could have been prevented, I have been appalled at the magnitude of the responsibility shunned and duty neglected.

"I am glad to know that the state has at last taken hold of this subject in earnest. Prior to 1909 the state was expending for public health about $7,000 per annum; in 1909 and 1910 it spent $12,500 per annum for this purpose, and in 1911 and 1912 it is spending $26,500 per annum. While this state ranks twenty-third in wealth, it now ranks nineteenth in expenditures for this all-important object. I do not believe the state invests any money which will yield a richer return. One example will suffice. Prior to 1911 the price of antitoxin was from $2.00 to $7.50 per dose. To many this price was prohibitory, but still there was probably $35,000 worth of this wonderful medicine used in the state per annum. By the aid of a law passed by the last legislature the State Board of Health has been able to reduce the cost of the medicine to from 50 cents to $1.95 per dose, thus effecting a saving in money nearly equal to the entire state expenditure for public health. And yet this does not take into account the burial expenses saved, the lives spared and the suffering relieved.

"The State Board of Health and its efficient secretary are doing a great work, deserve the entire confidence of the public, and should have the hearty support of the physicians of the state. The county superintendents of health are the captains on the field, charged with the duty of conducting the fight for public health, and their services are becoming better appreciated—a noble band engaged in a worthy cause. Let me urge on the people the wisdom and the duty, public and personal, of giving all health officials, state, county and municipal, their active cooperation and support in all efforts to improve sanitary conditions, to prevent disease, to limit and destroy contagious disorders, and in every way to improve and conserve the health of individuals and communities.

"The sympathetic assistance of the people is essential to the best results. The profession stands ready, prepared, planning and leading the onward health improvement. We should with faith and loyalty follow and do our part."

1. THE JOURNAL A. M. A., Nov. 4, 1911, p. 1553.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Fifth Month—Second Weekly Meeting

FRACTURES

VARIETIES

(a) Describe stellate, comminuted, multiple, punctured, gunshot, transverse and oblique fractures.

(b) Complete, incomplete, greenstick, depressed, fissured, fracture.

(c) As to displacement of fragments, depressed, with over-riding, transverse, rotary, angular and longitudinal displacement. Impacted fracture.

(d) Simple, compound and complicated fracture.

(e) Differentiate traumatic and pathologic fractures.[1]

ETIOLOGY: Predisposing and exciting causes. Mechanism of each.

SYMPTOMS: Immediate symptoms, local and general. Mediate symptoms, local and general.

COMPLICATIONS: Disturbances of skin; thrombosis and embolism; fat embolism; injuries to blood-vessels; injuries to nerves; local and general infections; shock and hemorrhage; pulmonary complications.

1. Progressive Med., December, 1905, p. 230.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, Jan. 10. Chairman, Dr. W. H. Sanders.

DISTRICT OF COLUMBIA: Washington, January 9. Sec., Dr. George C. Ober, 125 B St. S.-E.

ILLINOIS: Coliseum Annex, Chicago, January 17-19. Sec., Dr. James A. Egan, Springfield.

INDIANA: State House, Indianapolis, January 9-11. Sec., Dr. W. T. Gott, 57 State House.

NEW HAMPSHIRE: State House, Concord, January 9-10. Regent, Mr. H. C. Morrison, State Library.

NEW MEXICO: The Capitol, Santa Fé, January 14. Sec., Dr. J. A. Massie.

NEW YORK: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

OKLAHOMA: Oklahoma City, January 9-12. Sec., Dr. John W. Duke, Guthrie.

SOUTH DAKOTA: Huron, January 10-11. Sec., Dr. L. G. Hill, Watertown.

VERMONT: Montpelier, January 8-11. Sec., Dr. W. Scott Nay, Underhill.

WISCONSIN: Milwaukee, January 9-11. Sec., Dr. John M. Beffel, 3200 Clybourn Street.

Georgia October Report

Dr. C. T. Nolan, secretary of the Regular Board of Medical Examiners of the State of Georgia, reports the written examination held at Atlanta, October 10-12, 1911. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 80. The total number of candidates examined was 41, of whom 25 passed and 16 failed. The following colleges were represented.

College	PASSED	Year Grad.	Per Cent.
Birmingham Medical College	(1907)		80.5
University of Georgia	(1909) 80; (1911) 82,		82.5
Atlanta School of Medicine	(1911) 80, 80, 80		

Atlanta College of Physicians and Surgeons.....(1911) 80, 85
Atlanta Medical College.....(1895) 80
Chicago College of Medicine and Surgery.....(1911) 90.5
Rush Medical College.....(1901) 85.5
Tulane University of Louisiana.....(1894) 80
Maryland Medical College.....(1911) 80
Johns Hopkins University.....(1909) 87
Columbia University, College of Phys. and Surgs...(1894) 87.5
Jefferson Medical College.....(1888) 88; (1911) 81
University of Nashville.....(1911) 80
Meharry Medical College.....(1911) 81.5
Vanderbilt University.....(1907) 84.5; (1911) 84.5
University of the South.....(1902) 80; (1907) 82.5
University of Virginia.....(1910) 88

FAILED

Birmingham Medical College.....(1911) 75.5
Maryland Medical College.....(1910) 70, 70, 74.5; (1911) 74
Creighton Medical College.....(1910) 70
Leonard Medical School (1910) 63, 67, 67.
University of the South.....(1905) 53
Chattanooga Medical College.....(1907) 75.5; (1909) 57
University of West Tennessee.....(1910) 72.5
Meharry Medical College.....(1911) 75
Vanderbilt University.....(1911) 74.5
Knoxville Medical College.....(1908) 59

Arkansas November Report

Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Nov. 14-15, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 33, of whom 13 passed and 20 failed. Twelve candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Columbian University, Washington, D. C.	(1899)	88.1
College of Phys. and Surgs., Keokuk	(1880) 83.7; (1893)	80
University of Louisville	(1911)	84.3
Tulane University of Louisiana	(1907)	79.3
University Medical College, Kansas City	(1904) 76; (1911)	85.2
St. Louis College of Physicians and Surgeons	(1909)	78
Memphis Hospital Medical College	(1903) 85.3; (1911)	75.5
University of Nashville	(1901)	78.3
Vanderbilt University	(1911)	88.1, 89.4

FAILED

College of Physicians and Surgeons, Little Rock	(1910)	40.5 48.6, 66.1.
University of Arkansas	(1911)	68.5
University of Louisville	(1909) 70.7; (1910)	64.5
Flint Medical College	(1906)	22.6
Barnes Medical College	(1910) 61.8; (1911)	56.7
Memphis Hospital Medical College	(1911)	53.5
Meharry Medical College	(1909) 62.7, 67.2; (1910) 68.4; (1911) 47, 60.8, 66.2, 66.6, 69.5, 69.6, 70.9.	

LICENSED THROUGH RECIPROCITY

College.	Year Grad.	Reciprocity with
Georgetown University	(1908)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1893	Wisconsin; (1893) Michigan.
Chicago College of Medicine and Surgery	(1909) (1911)	Illinois
Hospital College of Medicine, Louisville	(1904)	Kentucky
Tulane University of Louisiana	(1895) (1907)	Louisiana
Woman's Medical College of Philadelphia	(1904)	Dist. Colum.
Jefferson Medical College	(1907)	N. Dakota
Medico-Chirurgical College of Philadelphia	(1902)	Indiana
University of Vermont	(1884)	Illinois

Massachusetts November Report

Dr. Edwin B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written, oral and practical examination held at Boston, November 14-16, 1911. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 72, of whom 47 passed, including 3 osteopaths and 1 non-graduate, and 25 failed, including 1 osteopath and 8 non-graduates. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1911)	80.5
College of Physicians and Surgeons, Baltimore	(1907)	78.7
Maryland Medical College	(1911)	75
Harvard University Medical School	(1910) 75, 75.7, 80.7; (1911) 75, 76, 77.1, 79.2, 80.3, 81.9.	
Boston University	(1911)	75, 78.7
College of Physicians and Surgeons, Boston	(1911)	76.7
Tufts College Medical School	(1910) 75; (1911) 75, 75.2, 75.4, 75.7, 76, 76.5, 78; 78.6, 79.1, 79.5, 79.4, 80.1, 80.2, 80.4.	
University of Michigan, Dept. of Med. and Surg.	(1908)	75
Dartmouth Medical School	(1904)	79.4
Albany Medical College	(1894)	80
Long Island College Hospital	(1896)	79.4
Woman's Medical College of Pennsylvania	(1910)	79.5, 80.7
University of Pennsylvania	(1869)	90
University of Vermont (1882) 75; (1907) 77.9; (1910) 80.3, 83.2		
Medical College of Virginia	(1911)	75
University of Athens, Greece	(1903)	75

FAILED

Medical School of Maine	(1911) 65.3
College of Physicians and Surgeons, Baltimore	(1910) 65.4
Tufts College Medical School	(1910) 68.9; (1911) 65.9, 69.3, 70.3
College of Physicians and Surgeons, Boston	(1908) 56.9, 64.6; (1911) 69.
Albany Medical College	(1908) 73
University of Vermont	(1911) 67.9
University College of Medicine, Richmond	(1907) 63.6
Laval University, Canada	(1911) 57.9, 68.7, 69.6
University of Naples, Italy	(1907) 53.6

Louisiana Homeopathic November Report

Dr. Edward Harper, secretary of the Louisiana Homeopathic Board of Medical Examiners, reports that at the meeting held at New Orleans, November 6, 1911, 1 candidate, a graduate of the Chicago Homeopathic College, 1902, was licensed through reciprocity with Indiana.

Book Notices

A MANUAL OF SURGERY. For Students and Physicians. By Francis T. Stewart, M.D., Professor of Clinical Surgery, Jefferson Medical College. Second Edition. Cloth. Price, $4 net. Pp. 682, with 553 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

The first edition of this book was favorably commented on at the time of its issue. To make the second edition, many pages have been added, old illustrations replaced by new ones and a general revision made to keep pace with progress in surgery. The author has not lost sight of his original purpose, to prepare a book on surgery for the undergraduate and for the practitioner who seeks a guide to surgery. It is well written, well arranged and well illustrated, although the small type and close lines are tiring to the eye.

THE HEALER. By Robert Herrick, Author of "Together." Cloth. Price, $1.35 net. Pp. 455. New York: The Macmillan Co., 1911.

The hero of this novel is an uncompromising idealist physician, bred in the wilderness, but with city training. The reader infers—for it is not stated outright—that Holden, the healer, had become a morphin habitué, and to overcome this left the city and went back to the wilderness in the far north. He was unusually gifted for relieving the sick; he had great will-power, unusual compassion for humanity, and a personality that won the confidence of all. With these attributes, rather than with medicine, he attained great renown as a healer. In the course of events a rich, aristocratic family of New York went into this wilderness and established a summer residence. In this family was a beautiful girl, who, in an accident, had compression of the brain, which the healer relieved by an operation. Mutual love, ending in marriage, was the result. The new life had its romantic attractions for the young wife for a while, but romance finally vanished, and separation followed.

The various aspects of the medical profession are viewed from what would be imagined a socialist's viewpoint. In any event certain aspects of the medical profession are held up to be about as bad as they can be. The present system of individual fees for medical work, Herrick says, "forces the profession to exploit the human body and the human soul for private profit." The practice of medicine is "a trade like any other." According to the author, there is necessity for a thorough reformation, if not a revolution. "The whole profession should be institutionalized—all medicine, all attempted healing. The state should control the school and the hospital and regulate the number and the work of the doctors, and should establish public dispensaries as their headquarters. No doctor should be permitted to receive fees from his patients. . . . That is the root of the monstrous ignorance and malpractice of the profession—the private fee. And the best doctors are beginning to realize this and prefer to work for a salary in an institution." "Medical service should be free for all and compulsory, provided by society as a whole for its own preservation and betterment."

Herrick's picture of the defeated idealist, of the emergency decompressive trephining in the wilderness, of the way in which the world troops to the door of "the true healer who can arouse the will, stimulate it, train it, perfect it, increase its force"—all this is excellently woven into an interesting story. In spite of the fact that the author gives expression to views that are not altogether flattering to the medical profession, the novel is a fascinating one.

DISEASES OF THE DIGESTIVE CANAL (ESOPHAGUS, STOMACH, INTESTINES). By Dr. Paul Cohnheim, Specialist in Diseases of the Stomach and Intestines in Berlin. From the Second German Edition. Edited and Translated by Dudley Fulton, M.D., Assistant Professor of Principles and Practice of Medicine, University of California College of Medicine, Los Angeles Department. Second Edition. Cloth. Price, $4. Pp. 383, with 431 illustrations. Philadelphia: J. B. Lippincott Co., 1911.

In this second English edition the translator has assumed the position of editor of the work and has included recent advances in the study of stomach and intestinal conditions as revealed by the *x*-ray, improvements in methods of diagnosing lesions of the esophagus, a discussion of gastric and duodenal hemorrhage, the technic of sigmoidoscopy, etc. New cuts and *x*-ray plates have been supplied by the editor for this edition, and throughout the new matter conforms in its practical, clinical character and value to that of the author's original work.

PRACTICAL PATHOLOGY. A MANUAL OF AUTOPSY AND LABORATORY TECHNIC. FOR STUDENTS AND PHYSICIANS. By Alfred Scott Warthin, Ph.D., M.D., Professor of Pathology and Director of the Pathologic Laboratories in the University of Michigan, Ann Arbor. Second Edition. Cloth. Price, $3. Pp. 321, with 55 illustrations. Ann Arbor: George Wahr, 1911.

This is a valuable book for the student of pathology as seen in the necropsy room. The author has sufficient experience as a teacher to prepare a work of this kind, and, while a considerable portion of the book is devoted to the methods of examination of tissues in the necropsy room, the actual teaching value of the work is great. The book is purely pedagogic in character and is not a reflection of personal opinions.

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Medicolegal

Suffering of Pain by the Semiconscious—Damages Allowed for Death of Brother

(Underwood vs. Gulf Refining Co. (La.), 55 So. R. 641)

The Supreme Court of Louisiana first set aside, but now, on a rehearing, affirms a judgment in favor of the plaintiffs for damages for the death of their brother, who, while in the employ of the defendant, was killed by a gear chain snapping and one of its ends whipping around and striking him on the head, crushing his skull. Still the court reduces the amount of the judgment from $5,000 to $1,000 on account of his physical suffering, plus $50 for the mental suffering inflicted on the plaintiffs by reason of the untimely death of their brother. The brother lived for several weeks after the accident, and was, at times, semiconscious, and so far conscious as to respond to calls made on him by smiling and attempting to speak. A witness, who was with him day and night, testified to the effect that he appeared, at times, to suffer intensely. That, taken in connection with an admission that experts, if sworn, would differ on the question whether a person in a semiconscious state can suffer pain, the court holds authorized the conclusion that the patient did suffer physical, though not, perhaps, mental, pain, and this notwithstanding that he did not appear so to suffer at any time when he was visited by the attending surgeon.

The court says that it can conceive of no reason why, if one be semi, or half, conscious of anything, he should not be semi, or half, conscious of pain. However, it appears to the court that, though one may be semiconscious of other things, that term can hardly be applied to the physical suffering, resulting, for instance, from acute indigestion or colic, which compels a man to roll and toss about in his sleep and finally awakes him, or to the mental suffering, superinduced by the same physical cause and which may consist of an agony of apprehension lest one fall down an imaginary precipice or be crushed by an imaginary weight.

Concerning the attitude of the courts toward allowing damages for mental suffering, the court says that it is not so much that the courts have not felt that mental suffering, as well as physical suffering and pecuniary loss, is an element of damage for which the sufferer should be compensated, but the idea was that, if every one who might be made to suffer mentally, by reason of an injury to, or the death of, another, were to be allowed to recover for such suffering, the courts would be crowded with the relatives, direct and collateral, of the party injured or killed, and, perhaps, by the friends also, and that, as between the wife and children, and grandparents, and uncles, and aunts and cousins, near and remote, it would be impossible to apportion any amount for which the wrongdoer could reasonably be condemned. But those difficulties do not appear to the court to stand in the way of a recovery in such a case as this, in Louisiana, where, by Act. No. 120 of 1908, brothers and sisters, in default of child, widow, or parent, succeed to the right of action which a person who dies from an injury had, at the moment of his death, against him by whose fault the injury was received, and they (the brothers and sisters) have also a right of action on their own account for the recovery of damages for the injury, moral or mental, as well as material, sustained by them by reason of such death.

Evidence of Mental Condition—Waiver of Privilege by Heirs

(Fish vs. Poorman (Kan.), 116 Pac. R. 898)

The Supreme Court of Kansas holds that where the issue to be determined by the jury is the mental condition of a person at a certain time, it is always competent to show previous acts of insanity, delusion or mental derangement, unless the previous conditions are excluded because they appear to oe disconnected and remote. Where the mental derangement or its cause is continuing or permanent in character, the objection of remoteness will not apply. Proof of a taint of insanity in the family of a person is competent, when there is other proof of the insanity of the person in question.

The heirs at law of one who has been treated by a physician may waive the provisions of the statute making a physician incompetent to testify to any knowledge obtained in his professional capacity from the patient.

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-First Annual Meeting, held at Kansas City, Mo., Dec. 18-19, 1911

The President, DR. AMOS W. ABBOTT, Minneapolis, in the Chair

Officers Elected

The following officers were elected for the ensuing year: President, Dr. L. L. McArthur, Chicago; vice-presidents, Dr. W. P. Dorsett, St. Louis, and Dr. B. M. Ricketts, Cincinnati; secretary-treasurer, Dr. Arthur T. Mann, Minneapolis; chairman of the committee on arrangements, Dr. William D. Haines, Cincinnati.

The 1912 meeting will be held in Cincinnati.

The Pathology That Remains After Non-Surgical Treatment of Inflammation Within the Abdominal Cavity

DR. J. W. COKENOWER, Des Moines, Ia.: Pain in the abdomen is Nature's signal of distress and always means something, but should not be relieved to the extent that it will retard or prevent ascertaining the cause that produced it. Infection in the abdominal cavity is not unlike infection in any other part of the body, and as soon as the diagnosis is cleared up, the cause and pathology should be removed so far as possible in any way that will give the best results. The non-surgical treatment of peritonitis is the cause of recurrent attacks of appendicitis, cholecystitis, salpingitis, etc.

Cancer of the Hollow Viscera of the Abdomen With Special Reference to Diagnosis.

DR. MILES F. PORTER, Fort Wayne, Ind.: The symptoms commonly regarded as sufficient to warrant a diagnosis of cancer of the hollow viscera are such as are not manifest until the favorable time for surgical interference has passed. Success in the treatment of cancer of the hollow viscera depends largely on its early recognition. It is often unsafe and unwise to make a diagnosis between malignancy and benignancy without the aid of the microscope. The way to improve our results in the surgical treatment of cancer of the hollow viscera lies in the direction of earlier celiotomy and immediate microscopic examination of the specimen.

DISCUSSION

DR. L. L. MCARTHUR, Chicago: I want to urge the use of the erect posture when a digital examination is made in cases of suspected carcinoma of the rectum. I would also urge the use of the sigmoidoscope, or the long rectal instrument with an electric light within its lumen at the deeper end rather than the head mirror. The latter rarely gives an illumination that is satisfactory, whereas the little electric light within the sigmoidoscope does.

DR. JAMES E. MOORE, Minneapolis: Future progress must be had from making timely exploratory operations by men who know pathology when they feel it and see it. It is difficult sometimes to differentiate between benign and malignant growths when we have the tumor between our fingers. That is particularly true of the hollow viscera, yet when a case is sufficiently grave to warrant exploration, we are justified in taking out a piece of the growth, making a frozen section, and establishing an absolute diagnosis at the time.

DR. AMOS W. ABBOTT, Minneapolis: I wish to call attention to an easy way of examining the rectum in cases of suspected carcinoma, and that is with the use of the ordinary Kelly cystoscope. You can get as good a view of the bowel with it as with the larger proctoscope under ordinary circumstances, and patients do not object to it.

DR. W. W. GRANT, Denver: The fact that the surgeon knows nothing of these cases and has not had the opportunity for any examination until the disease is far enough advanced to produce distinct clinical symptoms, often shows that it is too late even then to predict a good result from operative interference. As our instruments of scientific precision are at the present time indefinite and uncertain, we must get a closer study of the clinical history of these cases by the physician, and until that time comes and we have better diagnosticians and better clinicians, we will perhaps not have early diagnoses and better results in the treatment of cancer of the hollow viscera.

DR. M. L. HARRIS, Chicago: Until some specific reaction is discovered, the diagnosis of cancer in all internal organs, those not subject to direct investigation by the microscope in their inception, is entirely one of probability.

Early Removal of Gall-Stones and the Preservation of the Gall-Bladder

DR. ARTHUR E. BENJAMIN, Minneapolis: The interdependence of the gall-bladder, stomach, liver and pancreas is such that the gall-bladder should be preserved in all cases in which it is not hopelessly diseased and unable to regain its function. The frequency with which pancreatitis is associated with gall-stones in the common duct makes the gall-bladder an essential organ to assist in the drainage of the biliary passages in pancreatitis, and should be saved. The percentage of cancer associated and following the irritation of gall-stones in the biliary tract, should urge all practitioners to recognize their responsibility in a case of postponed operation for gall-stones.

DR. LEWIS L. MCARTHUR, Chicago: Matas has improved my technic by advocating the introduction at the time of operation of a small rubber catheter (*a demeure*) into the duodenum by way of the common duct, letting it project there to one-third or one-half its length. Through this, with absolute confidence of its arriving safely within the duodenum, he could introduce any desired amount of any given fluid, food or medicament indicated. In fact, he has in this manner for a period of three weeks given various foods and drugs, including saline purgatives to the great satisfaction of the patient, and with no untoward results because of its method of introduction.

DISCUSSION ON PAPERS OF DRS. BENJAMIN AND MCARTHUR

DR. VAN BUREN KNOTT, Sioux City, Ia.: I have been following some of Dr. McArthur's suggestions with beneficial results, using the common duct as a means of furnishing fluids and nutriment to the patient.

DR. ARTHUR T. MANN, Minneapolis: It is up to the surgeon to make an early diagnosis of gall-stones. The diagnosis we make now is not one of the presence of gall-stones, but a diagnosis based on the complications of gall-stones. The characteristic pain, nausea and vomiting, and inflammation around the gall-bladder, are all late manifestations of gall-stones, not early ones. We must direct our attention, as we did to appendicitis twenty years ago, making a diagnosis of appendicitis when we had an abscess, when we had a peritonitis, and so on, and it is the same way with gall-stones. We must make the diagnosis when the gall-stones are forming. The symptoms of the early presence or early formation of gall-stones are very obscure. The symptoms are not in the gall-bladder but in the stomach.

Some Phases in the Surgical Treatment of Gastric Ulcer

DR. W. D. HAINES, Cincinnati: In a limited experience with the recurrence of symptoms after operation for gastric ulcer, I am wholly unable to distinguish at the time of operation the type of ulcer which will be cured and remain cured by a gastrojejunostomy from the type to which this operation will afford but brief relief from ulcer symptoms. Removal of the ulcer-bearing area, while in many respects an ideal operation, carries a prohibitive mortality and has not been generally accepted as the best method for dealing with gastric ulcer. Excision of the individual ulcer in conjunction with gastroduodenostomy or gastrojejunostomy is an operation which is rapidly gaining favor with American surgeons. Excision has many commendable features, it is applicable to a solitary ulcer situated in any part of the stomach-wall, it adds very little to the risk, and the end-results are more satisfactory. Due weight should be given the physical condition of the individual case before determining on the type of operation to be performed. The rapidity with which some of these half-starved ulcer patients recuperate after efficient stomach drainage is established and has enabled us to convert in a short space of time an almost helpless risk into a comparatively safe risk for a secondary or causal operation, excision—resection of the ulcer-bearing area. Rarely have I seen a case of chronic gastric ulcer which did not show some degree of gall-bladder or pancreatic involvement. With the view of relieving this phase of gastric ulcer pathology, Dr. S. H. Smith and I have for the past two and a half years been draining the gall-bladder in connection with the work on the stomach. The immediate results have been very gratifying, and the after history of those cases which we have been able to trace have derived permanent benefit from this additional procedure, such as to warrant further continuance of this practice.

(To be continued)

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Twenty-Fourth Annual Meeting, held in Washington, D. C., Dec. 12-14, 1911

(Continued from page 2771)

Officers Elected

The following officers were elected for the ensuing year: President, Dr. J. M. T. Finney, Baltimore; vice-presidents, Drs. James E. Thompson, Galveston, Tex. and W. P. Carr, Washington, D. C.; secretary, Dr. William D. Haggard, Nashville, Tenn.; treasurer, Dr. William S. Goldsmith, Atlanta, Ga.

Old Point Comfort, Va., was selected as the place for holding the next annual meeting in 1912.

Where Shall the Line Be Drawn Between Medicine and Surgery in Borderline Cases?

DR. JAMES E. MOORE, Minneapolis: All diseases of the thyroid, except tumors, are medical in the early stages, because at that time a majority of them can be cured without operation. Many of them become surgical when neglected, or when non-surgical treatment fails. A case of goiter becomes surgical as soon as it gives serious symptoms which fail to yield to proper medical treatment. The danger is that it may be kept on the medical side of the borderline until the best time for operation has passed. Diseases of the breast are always surgical. In face of the facts that 80 per cent. of tumors of the breast are malignant, and the mortality of cancer without surgical treatment is one hundred per cent., it is difficult to understand how any man can have the temerity to treat a nodule in the breast by any but surgical means. Most diseases of the stomach are still on the borderline. Malignant disease here, as elsewhere, is always surgical, and when medical men, laboratory men and surgeons by their combined efforts shall have arrived at a means of early diagnosis as large a percentage of cures should follow surgery here as elsewhere, because this organ is very tolerant of surgery.

All gastric ulcers are primarily medical, because when promptly recognized the vast majority of them will recover under intelligent medical treatment. They become surgical when they cause perforation, persistent or recurrent hemorrhage or stenosis, and when for lack of or in spite of intelligent medical treatment they become chronic with thick walls and hardened bases. Dilatation of the stomach without stenosis is always medical. Diseases of the gall-bladder are practically all surgical. Most diseases of the liver are medical, for up to the present time surgery has demonstrated a very limited field of usefulness. The kidney furnishes many borderline cases. In the case of stone or pyogenic infection the treatment should be surgical. The treatment of Bright's disease by decapsulation has not afforded sufficient encouragement to give it a definite place in surgery. Experienced surgeons agree that surgery is a failure in the visceroptoses. Tuberculosis in all parts of the body furnishes many borderline cases, and whether treated medically or surgically there is certainly great opportunity for improvement over our present methods.

DISCUSSION

DR. HERMAN J. BOLDT, New York City: There are a number of women who have a chronic catarrhal inflammation of the appendix, whose cases may be classed as on the borderline. I refer to women especially who have fat abdomens, who are to a greater or less degree neurasthenic or psychasthenic, and who can be cured by intelligent medical care, general hygiene, massage, etc. There are a number of women who are constipated, who will get well by intelligent medical treatment. There is another large percentage of patients who have pelvic conditions which are on the borderline, consequently it behooves the practitioner to study these patients carefully and to give them the benefit of a doubt before resorting to operations which will cause the destruction of a function which is of vital importance to womanhood.

The Colon Bacillus, a Regulator of Population

DR. ROBERT T. MORRIS, New York: This paper will be published in full in THE JOURNAL.

Parathyroids and Their Surgical Relation to Goiter

DR. CHARLES H. MAYO and DR. BERNARD F. MCGRATH, Rochester, Minn.: The parathyroids are concerned in the metabolism of the body, but definite knowledge of their physiologic function and pathologic importance is yet very limited. Many diseases have been attributed to these glands without having had their etiologic relationship supported by scientific investigations. Experimentation, clinical and histologic examinations have shown a connection between the parathyroids and tetany. Recent investigations have proven that pathologic processes in the parathyroids produce hyperplasia with resultant hypo-function, especially in the presence of a contributing factor, for example, gastro-intestinal disease. Hemorrhages, which probably occur in the glands, during labor, are given as one of the causes of the pathologic processes. It has been stated that tetany does not take place at the time of bleeding because the brain of the new-born is not sensitive, owing to the larger contents of calcium. The attacks rarely occur before the third month. Defective calcium metabolism has been noted in experimental tetany. Histologic examinations have shown a relationship between the parathyroids and tetania gravidarum. Cases of tetany associated with congenital syphilis, in which the parathyroidal tissue was hypoplastic, have been cited. Some authorities hold a morphological similarity and inter-relation of function between the parathyroids and the thyroid. In operations on the thyroid the variable size, location, appearance and condition of these little bodies should be kept in mind. If such a mass be removed accidentally, it should at once be implanted beneath some part of the capsule.

The Cinematograph As An Aid to Medical Education and Research

DR. RUDOLPH MATAS, New Orleans: As an agent in imparting sanitary and hygienic knowledge of great importance to the masses, the cinematograph is playing a most effective part. For instance, in impressing on the public mind the dangers which lurk about the house fly as a transmitter of disease and of the importance of eradicating this pest, the moving picture is far superior to any lecturer's ability in its power to depict the peril. The machine has been used in France to analyze the gait of the ataxic, paraplegic or hemiplegic, and other pathologic types of locomotion. Paul Sainton has also recently studied the convulsive tics with moving pictures. With the ordinary cinematograph the photographic film moves discontinuously, being arrested at the moment of each exposure. While this is simple enough at moderate speeds, it would be quite impossible when the exposures are made at the rate of two thousand a second, and the mean speed of the film four thousand centimeters a second. These are the figures that are necessary for the study of insect flight, and these are attained on the new instrument. With such a speed, the movement of the film must be continuous and a sharp image is possible only if the exposure does not exceed the one million, four hundred thousandth part of a second, and for this the electric spark gives a light of sufficiently short duration. In order to study the movement represented on the films, it is merely necessary to pass them through the ordinary cinematograph, making some fifteen exposures a second, instead of the fifteen hundred or two thousand a second employed in the taking of the photographs, and then the movements one hundred or more times as slow will be seen and in many instances easily followed.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Dec. 13, 1911

The President, DR. C. B. LONGENECKER, in the Chair

A New Scalp Tourniquet

DR. ERNEST LAPLACE's description of this method will appear in THE JOURNAL with illustrations.

Report of the Committee on Hospital Dispensary Abuse

DR. HOWARD S. ANDERS, Chairman: At the first meeting of the committee there was adopted a definition of hospital dispensary abuse which should serve as a basis and limitation of facts, evidence and inference. A letter of queries was then sent to the various department heads of hospital dispensary service for representative statements of the conditions met with and methods in use to correct abuse and for opinions concerning improvement and reform. Letters were sent to seventy-eight physicians affiliated with seventeen hospitals having medical, surgical and special-disease service. Fifty-two replies were received.

QUERY 1. Is there any effort in the department over which you have control to eliminate from the dispensary those patients who are in a position financially to be treated at the offices of private physicians? If so, what?

Twenty answered in the affirmative; twenty-four in the negative.

QUERY 2. Do you direct your assistants to ask each dispensary patient a part of the routine questioning for the history card, as to their ability to pay a physician?

Fifteen replied in the affirmative; twenty-nine in the negative.

QUERY 3. If the preceding question is answered in the affirmative, do you refer such patient back to their physician; or, if they have no physician, what is your procedure?

Nineteen answered affirmatively as to referring such patients back; eight negatively, and thirteen were non-committal.

QUERY 4. Would it assist in reducing the dispensary abuses to require applicants for treatment to establish their inability to pay for services in a medical registrar's office as a preliminary?

Twenty-seven were positively favorable; nine unfavorable to such a plan.

From the results of this investigation and a study of the situation elsewhere, the committee offered the following recommendations for the solution of this vital medicosociologic problem:

1. Every individual dispensary physician, head and assistant, should constitute himself a committee of one to sincerely and steadily strive to abolish the abuse; especially should this be done by the members of the Philadelphia County Medical Society. 2. A social service department should be established in connection with each institutional dispensary, so as to ascertain those patients who are, and who are not, able to pay; and further, as in the work of the Charity Organization Society, to follow up the cases for thoroughness and accuracy of information. 3. That it should be made a misdemeanor under state law for any hospital or dispensary receiving state financial aid to treat as free patients those who it is found are able to pay a medical fee. 4. That consequent on the preceding suggestion, the Philadelphia County Society Delegates to the next state medical convention, should be instructed to induce the Committee on Legislation of that body to take up the matter of formulating such law tending to diminish or prohibit the dispensary abuse throughout this commonwealth.

The Status of Midwifery in Pennsylvania and a Study of the Midwives of Philadelphia

DR. S. W. NEWMAYER: Legislation for midwifery brings up problems that are in some respects akin to dispensary abuse, when it is considered that the midwives in Philadelphia attend to about 25 per cent. of the births, that they are the physician in about 10,000 births a year, receive the same compensation for their services as the physician (and have not received the previous training), that many give medical care before and after to the mother of the child, one can appreciate the seriousness of the problem. Each midwife in Philadelphia attends to from two to thirty cases a month. I believe that the midwife to-day is a useless institution but I also believe that she cannot be wiped out with legislation. The time not being ripe for such a radical legislation, we should consider the enactment of laws which would protect the mother and the baby against the incompetent and daring midwife. Although Philadelphia was the city most concerned by the ultimate effects of recent legislation, Philadelphians were not consulted, except to ask the physicians here to endorse a bill framed by outsiders unacquainted with our conditions. The clause exempting midwives in practice more than ten years from examination is bad, because it is the midwife of long standing who is the danger factor. She often knows little of abscesses and is therefore overconfident; is found attending abnormal cases and often performing ordinary gynecologic operations. The law gives a permanent license, which I believe is a mistake. Such procedure prevents the continuous supervision which is as important in the profession of midwifery as licensing them.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Surgery, Gynecology and Obstetrics, Chicago

December, XIII, No. 6, pp. 597-727

1 Raynaud's Disease. A. H. Ferguson, Chicago.
2 Volvulus. E. P. Magruder, Washington, D. C.
3 *Accidents and Deaths from Exploratory Puncture of Pleura. H. Dayton, New York.
4 Cervical Pregnancy. I. C. Rubin, New York.
5 Focal Epilepsy. A. L. Skoog, Kansas City, Mo.
6 Fibromyomata of Uterus from Standpoint of Gynecologist and Obstetrician. L. E. Frankenthal, Chicago.
7 Surgical Pathology of Prostate. L. B. Wilson and B. F. McGrath, Rochester, Minn.
8 *Contribution to Surgery of Hernia. W. R. Cubbins, Chicago.
9 *Improved Method of Approaching Lower Abdomen. G. W. Roberts, New York.
10 Case of Brain Tumor with Second Operation. J. R. Judd, Honolulu, Hawaii.
11 Pharyngeal Anesthesia. H. K. Thoms, New London, Conn.

3. **Exploratory Puncture of Pleura.**—The records of about 20,000 consecutive admissions to the medical wards of the New York Hospital, Dayton found included one case of breaking of the needle in the chest-wall, three of subcutaneous emphysema, one of puncture of an abscess of the lung followed by septic symptoms, four of hemoptysis, one of puncture of an aortic aneurysm, one of syncope and one of death after sudden onset of grave cerebral symptoms. The precautions in performing exploratory puncture of the pleura, which analysis of these twenty-three cases of accidents due to pleural reflexes suggests, are: (1) Avoid moving a patient with pneumonia or pleurisy with effusion, especially from the recumbent to the sitting posture. (2) Avoid turning him on to the sound side. (3) Avoid excitement before the operation. (4) Use as small a needle as will suffice and avoid all unnecessary shock as this is badly borne by pneumonia patients. (5) Never use the exploring needle as a labor-saving device if a careful study of physical signs will suffice. (6) Puncture cases with probable consolidation only when a definite indication for diagnosis or treatment exists, e. g., the probable presence of pus as shown by the temperature curve and increasing polymorphonuclear leukocytosis, or extreme and increasing signs of fluid indicated by displacement of the apex-beat or by respiratory embarrassment. In a case beginning as a definite lobar pneumonia it is often more conservative to wait until after the crisis before exploring, unless the symptoms suggest the necessity for early operation if pus should be found. In such a case rapid resolution may remove the signs which simulate fluid. If the signs are such, however, as to prevent a clear diagnosis of the intrathoracic lesion, and empyema is suspected, explore without delay, especially in children. Dayton believes that more lives are probably lost by delayed diagnosis of empyema than by all the accidents due to exploratory puncture of the pleura.

8. **Surgery of Hernia.**—The value of the blood-supply to the external oblique muscle and the simplicity of the continuous suture in an operation of this type are emphasized by Cubbins. Only one suture is used by him for approximating all the structure.

9. **Method of Approaching Lower Abdomen.**—The method developed by Roberts, although considerably modified, is based on the principle promulgated by Pfannenstiel and is executed as follows: He uses a keen-bladed, hollow-ground knife with offset handle to make a semicircular skin-graft incision 4 or 5 inches in length and so placed that it is all or nearly all below the pubic hair line and the center of its convexity comes just above the pubic symphysis. The knife cuts a graft from ¼ to ⅛ of an inch long before it reaches the subcutaneous tissue; the graft is then wiped back and the incision continued in the usual manner with a scalpel down to the fascia of the external oblique which is bared by gauze wiping. In traversing the fat-layer the incision is carried somewhat upward till it reaches the external oblique about 1½ inches above the pubic border; the anterior rectus sheath (conjoined fibers of the tendon of the external and internal oblique and transversalis) is cut from linea semilunaris to linea semi-

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lunaris exposing the perpendicular fibers of the rectus abdominis on each side as well as those of the two pyramidales, when these little muscles are present. From the ends of this incision an incision is made which splits the fibers of the external oblique upward and outward for 2 or 3 inches and also a similar incision which splits the fibers of the internal oblique outward toward the pelvic wall in a direction which carries the incision under the lower portion of the external oblique, the transversalis being hardly distinguishable in this location.

This flap, lying anterior to the recti, is lifted up and the fibers dipping down between the recti are cut as the lifting process goes onward till the recti are bared 4 or more inches of their length. The recti are now separated, the right rectus being slid from under the right pyramidalis and the peritoneum opened longitudinally and in the usual manner. The wound is closed throughout with No. 1 plain iodin catgut. One continuous suture enters the border of the left rectus or pyramidalis at the lower limit of its separation and then passes back and forth through the peritoneal borders in such a manner that these edges are turned out and broad peritoneal surfaces are approached; the last stitch goes up through the border of the right rectus and begins a continuous suture of the rectus borders, terminating at the lower end of the incision where the thread is tied to the other end of the peritoneal suture. Another long strand of No. 1 catgut approximates the separated fibers of the oblique abdominal muscles as an over and over stitch, approximating the edges of the internal oblique and transversalis as far as the left linea semilunaris when it begins to involve all muscles in front of the recti as far as the right linea semilunaris. To the right of the right semilunaris the suture again approximates the separated fibers of the internal oblique and transversalis only, but the last stitch goes up to the upper border of the external oblique at the limit of the incision on the right where it begins to return to the point of starting, involving external oblique only as far as the right semilunaris. Then in front of the recti the stitches are placed between those of the earlier portion of the suture and on the left side, closing the external oblique and being tied to the beginning of the strand.

A single strand of the same sized catgut now closes the skin wound as a subcutaneous stitch, leaving the original skin graft or flap unattached as it was when the skin graft knife was laid aside. The fat layer is allowed to take care of itself. The skin flap is fastened in place by means of strips of sterile court plaster ⅜ of an inch wide and 1½ inches long, which approximate the edges with perfect accuracy, leaving uncovered interspaces of about ¼ inch. These strips of court plaster complete the dressing, a sterile towel is placed over the wound while the patient is being taken to her bed but the incision is then exposed to the air for an hour or so till it is thoroughly dry, when the abdomen is treated as though there was no incision except that it is under no circumstances washed.

Wisconsin Medical Journal, Milwaukee

November X, No. 6, pp. 309-366.

12 *Venous Pulse and Heart Sounds. J. A. E. Eyster, Madison.
13 Injuries to Orbit. G. E. Seaman, Milwaukee.
14 *Medical Inspection of Schools. R. W. Jones, Wausau.

12 and 14. Abstracted in THE JOURNAL, July 22, 1911, p. 314.

American Journal of Obstetrics and Diseases of Women and Children, New York

December, LXIV, No. 408, pp. 925-1143.

15 *"Carcinomatodes" (Krukenberg Tumor) of Ovary. G. W. Outerbridge, Philadelphia.
16 Urinary Analysis as Diagnostic Aid in Toxemias of Pregnancy. A. S. Hotaling, Syracuse, N. Y.
17 Urine in Pregnancy. W. A. Groat, Syracuse, N. Y.
18 Responsibility of the Obstetrician. F. S. Newell, Boston.
19 Pseudohermaphrodite. H. S. Crossen, St. Louis.
20 Drainage: Essential Element in Surgery of Biliary Tract. C. N. Smith, Toledo, O.
21 *Obese Abdominal Wall. F. Reeder, St. Louis.
22 Factors Entering Into Mortality of Acute Intestinal (Mechanical) Obstruction. J. Y. Brown, St. Louis.
23 *Use of Sterilized Animal Membranes in Surgery. R. T. Morris, New York.
24 Duty of Physician Toward Patient Afflicted With Venereal Disease. A. Vandervoort, Albany, N. Y.
25 *Cancer. J. G. Sherrill, Louisville, Ky.

15. **Carcinomatodes of Ovary.**—A specimen of this type of tumor was examined by Outerbridge. He believes that certain fibrosarcomata of the ovary may undergo throughout comparatively large areas a myxomatous degeneration, this affecting both the ground substance and the cells, the former then showing large, loose meshes, the latter becoming swollen, pale, faintly granular, with a deeply staining, crescentic, peripheral nucleus, presenting the so-called "seal-ring" form. These are the true "Krukenberg tumors" of the ovary and are comparatively rare, though probably not so rare as many authors believe. The cells of practically any other ovarian tumor, whether primary or secondary, may undergo a similar mucoid degeneration and produce microscopic appearances very similar to the preceding type, at least as far as the cellular elements are concerned, but usually the presence of distinct carcinoma masses, glandular formations, etc., in certain areas will reveal their true nature. Outerbridge contends that the causal relationship of malignant tumors of the stomach and ovary has been sufficiently well demonstrated to warrant the suspicion of the presence of both these conditions when either one has been diagnosed, until it has been proved by palpatory examination during operation that the other does not exist.

21, 23 and 25.—Abstracted in THE JOURNAL, Oct. 14, 1911, p. 1313.

Kentucky Medical Journal, Bowling Green

October 15, IX, No. 20, pp. 873-904.

26 Postoperative Gastric Dilatation. G. A. Hendon, Louisville.
27 The Anal Canal with Special Reference to Reflex Phenomena; Report of Cases. G. S. Hanes, Louisville.
28 Prevention and Treatment of Eclampsia. J. B. Lukins, Louisville.

November 1, IX, No. 21, pp. 905-958

29 Pellagra. O. P. Nuckols, Pineville.

Journal of Cutaneous Diseases, New York

December, XXIX, No. 12, pp. 617-675

30 Oriental Sore. S. T. Darling, Canal Zone.
31 Method of Demonstrating Spirochetes and Trypanosomes by Means of Nigrosin. C. Goosmann, Cincinnati.
32 *Unusual Form of Keratoma. A. J. Markley, Denver.
33 Use of Uviol Lamp in Treating Psoriasis, with Report of Case. W. J. Heimann, New York.

32. **Unusual Form of Keratoma.**—While handling an automatic gun, Markley's patient accidentally had his right hand caught in the mechanism, causing a lacerated wound of the ball of the thumb. The injury was dressed without sutures and healed promptly without incident and with but slight scarring. About four months later, at the site of the injury, a nodule the size of a pinhead appeared, deeply imbedded in the skin, rapidly increasing in size, until at the end of six months it appeared at the surface as a pearly-white body about the size of a small pea. The growth itself and the area immediately surrounding it were now exquisitely sensitive to pressure of any kind. Pain radiated up the arm and finally became so severe as to preclude writing or any such use of the thumb, on which account the small tumor was then excised. Because of its extreme local sensitiveness and the radiating character of the pain it was thought that the growth was connected with a nerve, probably analagous to the neuromata developing in amputation stumps. On section, however, it was found that it consisted of concentric layers of flattened, horny cells, many of which still retained their nuclei, the whole surrounded by an intact layer or capsule of epithelium continuous with that of the surface. This accumulation of imperfectly keratinized cells remained within the epithelial layer and as growth proceeded the mass was thrust downward into the corium, causing the pain which was evidently mechanical in origin and due to pressure on the deep layers of the corium and the subcutaneous structures.

Journal of Medical Association of Georgia, Augusta

December, I, No. 5, pp. 153-196

34 Dysmenorrhea. J. R. B. Branch, Macon.
35 *Diseases of the Mouth. R. Adair, Atlanta.
36 Thrombosis of Cavernous Sinus, with Report of Case. H. H. Martin, Savannah.
37 Apomorphine and Its Uses. S. A. Visanska, Atlanta.

38 Treatment of Cancer of Breast. F. K. Boland, Atlanta.
39 *Nausea and Vomiting: Their Clinical Significance. W. W. Jarrell, Thomasville.
40 Acute Diffuse Suppurative Peritonitis. G. A. Traylor, Augusta.
41 *Diseases Produced by Bacillus Coli Communis in Intestines. F. B. Turck, Chicago.

35 and 41. Abstracted in THE JOURNAL, June 10, 1911, pp. 1754 and 1756.

39. Abstracted in THE JOURNAL, May 27, 1911, p. 1603.

Southern Medical Journal, Nashville, Tenn.

December, IV, No. 11, pp. 795-862

42 *Avulsion of Nerves for Neuralgia; Thiersch Method. H. P. Cole, Mobile, Ala.
43 Nutrition of Children. S. F. Hale, Mobile, Ala.
44 Purgatives with Pain in Abdomen. C. N. Cowden, Nashville, Tenn.
45 State Care of Epileptics. G. T. McWhorter, Riverton, Ala.
46 Sarcoma of Stomach, With Report of Case. J. Overton, Nashville, Tenn.
47 Glanders: Mode of Transmission and Diagnostic Difficulties. H. D. King, New Orleans.
48 Results Obtained with Salvarsan E. D. Holland, Hot Springs, Ark.
49 *Experimental Administration of Salvarsan in Leprosy. C. Wellman, W. A. Clark and T. J. Clark, San Francisco and New Orleans.

42. **Avulsion of Nerves for Neuralgia.**—Cole cites a case of neuralgia in the right supra- and infra-orbital branches of the trigeminal nerve. Intense neuralgic attacks ensued on the slightest pressure over these two nerve trunks at their point of presentation under the soft tissues. An infection of the right antrum of Highmore was the probable etiologic factor. The patient gave a history of purulent pneumonia of several months' duration. Because of the cardio-vascular-renal lesion a Gasserian operation was considered contra-indicated. Under ether anesthesia, the supra-orbital nerve was readily exposed through an eyebrow incision. Cutting the trunk at the orbital ridge, the distal 3 inches with all its branches was slowly and easily avulsed by twisting on forceps. The proximal stump was then plugged by screwing in a silver screw; a few strands of catgut were placed to drain the wound through a small stab wound below the incision. The antrum of Highmore was freely opened, curetted and packed through an oral incision, old granulations found in antrum. Ether anesthesia, twenty-five minutes. There was considerable edema about orbit for several days. Fine lines of subcutaneous hemorrhage outlined the course of the avulsed nerves, and extended well up on the forehead and downward below the ramus of the jaw. The patient left the hospital within a few days and made an uneventful recovery. The patient has practically regained his former health and weight, has resumed his occupation and has not had an attack of neuralgia since the operation, a period now of over twelve months.

49. **Salvarsan in Leprosy.**—Seven lepra patients were under observation by the authors. Two were of the anesthetic type, while five were of the nodular form. On January 17, 1911, five patients were given 6 decigrams of salvarsan, subcutaneously, and for purposes of control, two patients (one of the anesthetic type) were given 20 c.c. normal salt solution. Other than these subcutaneous injections no change was made in their mode of life. Some local reaction at the site of injection occurred in the cases receiving the drug, with considerable pain for the first two days. One patient died from septicemia following accidental hot water burns. One control patient is apparently unchanged, while the other, after growing steadily and rapidly worse, was finally given salvarsan which, however, failed to arrest the disease and the patient died April 21, 1911. There has been a gain in weight and strength and in the appearance of the superficial lesions, notably those of the throat and skin in the case of those originally treated. The attendant, who is not a trained observer, reports that in those patients who originally received the salvarsan there is a marked gain in energy and cheerfulness. In none of the cases is there any clinical evidence that the bacilli in the tissues are destroyed or their activity impaired. The blood-findings seem to be of no special significance.

Colorado Medicine, Denver

December, VIII, No. 12, pp. 443-448

50 *Differential Leukocytes at Various Altitudes. O. M. Gilbert, Boulder.
51 Diagnosis in Early Childhood. H. B. Whitney, Denver.
52 Rheumatism. L. W. Ely, Denver.
53 Gravity for Correction of Malpositions of Head in Cephalic Presentations in Labor. J. Lindahl, Denver.

50. **Differential Leukocytes.**—Gilbert's conclusions as to the effect which altitude plays in producing lymphocytosis is that it is one of the most important of several factors which tend to cause such an increase. He believes that the combined effect of these other factors, which ordinarily go hand in hand with increased altitude, such as sunshine, absence of continuous cloudiness, low humidity, sandy and well-drained soil, as well as increase in actinic rays, is even greater than that of altitude. He examined sixty cases of tuberculosis and followed Dr. Webb's classification in order to be able to compare results. The results agree rather closely except in one particular. Gilbert found that his "apparently cured" patients run higher in lymphocytes than the normal patients do. After closely observing the significance of lymphocytosis as a prognostic criterion in tuberculosis for nearly a year he is convinced that it is exceedingly helpful. A low count has almost always been accompanied or followed by poor clinical progress.

Maryland Medical Journal, Baltimore

November, LIV, No. 11, pp. 309-325

54 Syphilitic Meningitis of the Anterior Fossa, with Uncinate Gyrus Syndrome Simulating Neoplasm. T. A. Williams, Washington, D. C.
55 Tendencies in Medical Education in the United States. L. F Barker, Baltimore.
56 Ruptured Quadriceps Extensor Tendon; Report of Case. N. Winslow, Baltimore.

Canadian Medical Association Journal, Toronto

December, I, No. 12, pp. 1115-1227

57 Sanitary Milk. T. P. Shaw.
58 *Experimental Study of Phagocytic Immunity Produced by Tuberculin. J. C. Meakins, Montreal.
59 Primary Pyelitis in Infants. J. T. Fotheringham.
60 *Molds in Alimentary Canal. I. P. Hall, Vancouver.
61 Lung Abscess. E. M. von Eberts, Montreal.
62 New Combined Examining and Operating Air Distention Endoscope. G. S. Gordon, Vancouver.
63 Use of Radium in Ophthalmology. G. S. Ryerson, Toronto.
64 *Simple Method of Treating Fractured Clavicle. R. J. Manion, Fort William.
65 Malignant Edema. M. Chisholm, Halifax.

58. **Phagocytic Immunity Produced by Tuberculin.**—According to Meakins the inoculation of the rabbit with attenuated, living tubercle bacilli rapidly produces an immunity to lethal doses of virulent tubercle bacilli. The inoculation of the rabbit with killed tubercle bacilli in sufficient amounts over a long enough period, produces an active immunity to virulent tubercle bacilli. The estimation of the phagocytic power of the serum affords a fairly accurate estimate of the immunity possessed by the animal immunized. The injections into the rabbit of tuberculous toxin or "old tuberculin" does not produce any increase of the phagocytic power of the serum, nor does it produce any appreciable immunity to virulent tubercle bacilli. The fact that the injection into the rabbit of killed tubercle bacilli produces an immunity to virulent tubercle bacilli, Meakins says, might be taken advantage of to produce an immunity in infants before they become primarily infected with tuberculosis.

60. **Molds in Alimentary Canal.**—Hall believes that molds have a causal relation to cholera nostras and infantile diarrhea for the reason that molds are often present when no other sufficient cause of the symptoms can be found. They are present in abundance in some of the most fatal diseases. Their partial destruction is followed by immediate improvement. Their complete removal in such cases is an essential element in recovery.

64. **Treatment of Fractured Clavicle.**—Having an assistant hold the patient with the shoulders retracted, Manion attaches a 2-inch strip of adhesive plaster firmly to the front of the affected shoulder and over the point of it. It is then swung around the back of the chest, under the opposite arm, across

the front of the chest and finishes under the mammary or axillary region of the affected side. Theoretically, this is not quite proper, as it pulls down the affected shoulder, but this is corrected by a sling to elevate the elbow.

Chicago Medical Recorder

December 15, XXXIII, No. 12, pp. 656-714

66 Puerperal Infection. T. J. Watkins, Chicago.
67 Curability of Morphin Habit. W. F. Waugh, Chicago.
68 Farce of Medical Ethics. H. J. Achard, Chicago.
69 City Budget and Department of Health. H. R. Sands, Chicago.
70 Milk-Supply of Washington. G. M. Whitaker.

Bulletin of Manila Medical Society

October, III, No. 10, pp. 167-179

71 *Treatment of Puerperal Infection by Drainage of Uterus. B. Roxas, Manila.

71. **Treatment of Puerperal Infection.**—Since July, 1910, drainage of the uterus by means of a rubber tube has been systematically used in puerperal infections by Roxas without a bad result. Sometimes serum or vaccine treatment is employed in addition to drainage. The discharge of a large quantity of pus through the drainage tubes in one case cited was followed by gradual lowering of the patient's temperature, with occasional slight rises whenever the rubber tubes were expelled by the contraction of the uterus or abdominal wall. The mucopurulent discharge from the uterus gradually subsided and twenty days after the treatment was instituted the patient had entirely recovered. As an adjunct treatment, general tonics were used.

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American Journal of Diseases of Children, Chicago

December 2, No. 6, pp. 369-450

72 *Infantile Paralysis. R. W. Lovett and M. W. Richardson, Boston.
73 Pyloric Stenosis in Older Children; Report of Case of Pyloric Spasm Ending Fatally. E. E. Graham, Philadelphia.
74 Apparatus for Collection of Excreta of Infants. E. F. Du Bois, New York.

72. **Infantile Paralysis.**—The authors present a brief resumé of present accepted knowledge of the various aspects of the disease and an analysis of the studies in Massachusetts made by the State Board of Health for the four years beginning in 1907.

New York State Journal of Medicine

December, II, No. 12, pp. 559-612

75 *Prevention of Deformity. W. R. Townsend, New York.
76 Pathologic Relation of Anesthetic to Surgical Procedure. W. C. Woolsey, Brooklyn.
77 Causes and Treatment of Postoperative Complications and Early Voluntary Muscular Movements. W. F. Burrows, New York.
78 Case of Purpura Hemorrhagica. J. M. Swan and H. Dewolf, Watkins, N. Y.
79 *Diagnosis of Fractures of Hip. C. H. Baldwin, Utica.
80 Treatment of Fractures in and About Neck of Femur. D. M. Totman, Syracuse.
81 *Some Conditions Simulating Disease of Hip or Spine. P. Le Breton, Buffalo.
82 Influenzal Arthritis. J. P. Creveling, Auburn.
83 Physician and Optician. E. W. Ayars, Alfred.
84 Misconceptions Regarding Ophthalmia Neonatorum. E. M. Alger, New York.
85 Rôle of Smaller Hospital. M. O'Meara, Kingston.
86 Vaccination. D. S. Burr, Binghamton.

75. **Prevention of Deformity.**—Speaking of flat-foot, Townsend says that the condition to-day is deplorable in regard to the use of so-called flat-foot supporters. People who have no flat-foot are wearing them; people who have flat-foot are wearing them. The first class do not need them; the second class get no benefit from them, because they are faultily made and do not fit. The abuse of flat-foot supports is growing and the profession is to blame for it. Of the large number of patients seen at the hospital, who are unable to pay for treatment, nearly all have bought at one time or another some form of flat-foot support. The practice of many physicians of telling a patient to go to a shoe store and buy a support because he has flat-foot is certainly most deplorable and still more deplorable is it when the surgeon does not take the trouble to make an examination of the foot to see whether there is anything needing treatment. It should, therefore, be the aim and object of all to endeavor to prevent deformity and especially should those who are engaged in corporation work see to it that those who are to make the employees of the future are sound in mind and sound in body.

79. **Fractures of Hip.**—It is urged by Baldwin to employ the *x*-ray in all injuries about the hip unless from the symptoms and physical signs we are sure without reasonable doubt that no change in the contour of the bone exists. He says we may not be able to carry about *x*-ray apparatus suitable for making skiagraphs of hips, but we can carry a tape measure, and by this, by our powers of observation, and by our fingers, satisfy ourselves whether or not it would be wise to convey a patient to an *x*-ray machine.

81. **Disease of Hip or Spine.**—Seven cases in which the attending physicians suspected disease of the spine or hip because of symptoms referred there, while the further course in each case demonstrated that the trouble lay elsewhere, are reported by Le Breton. Two cases simulating hip disease were of abscess following trauma, one located along the psoas muscle in front of the lumbar spine and the other back of the left kidney. Of the remaining five cases, all simulating disease of the spine, the first was a case of retroperitoneal carcinoma and the remaining four were cases of tuberculosis, one a tuberculous kidney, another a cold abscess near the kidney, another in which the exact site of the lesion was not determined and the last a case of tuberculosis of the appendix, complicated by tuberculous endometritis.

Journal of Minnesota State Medical Association and North-Western Lancet, Minneapolis

December 15, XXXI, No. 24, pp. 591-615

87 Diseases of Pancreas. R. E. Weible, Fargo, N. D.
88 Physiology and Pathology of Gall-Bladder in Relation to Its Removal. H. P. Ritchie, St. Paul.
89 Infection and Immunity. H. E. French, Grank Forks, N. D.
90 A Dicephalic Monster. F. W. Bullen, Hibbing.

Boston Medical and Surgical Journal

December 14, CLXV, No. 24, pp. 899-936

91 Outbreak of Tonsillitis or Septic Sore Throat in Eastern Massachusetts and Its Relation to Infected Milk-Supply. C. E. A. Winslow, New York.
92 Clinical Aspects of Epidemic of Septic Sore Throat in Cambridge, May, 1911. E. A. Darling, Cambridge, Mass.
93 Epidemic of Tonsillitis Due to Infected Milk. M. W. Richardson, Boston.
94 Epidemic of Sore Throat Occurring in Boston and Vicinity During May, 1911. J. L. Goodale, Boston.
95 Practical Application of Blood-Vessel Surgery. E. H. Risley, Boston.
96 Tubercular Epididymitis; Analysis of 153 Cases. J. D. Barney, Boston.

December 21, CLXV, No. 25, pp. 937-974

97 *Contagious Affections of Skin in Preparatory Schools and Colleges. J. T. Bowen, Boston.
98 *Diagnostic Importance of Hemoptysis. W. B. Bartlett, Hartford, Conn.
99 *Comparative Toxicity of Various Alcoholic Beverages. J. Friedenwald, Baltimore.
100 Tissue Necrosis Following Injections of Salvarsan. R. L. Sutton, Kansas City, Mo.
101 Nine Cases of Ocular Syphilis Treated by Salvarsan. F. E. Cheney, Boston.

97. **Contagious Affections of Skin.**—Bowen contends that there are a number of purely cutaneous diseases, most, if not all, of them undoubtedly communicable, which are of common occurrence in preparatory schools and among the younger members of colleges. It is from these sources that the brief descriptions and comments are drawn. He cites cases of impetigo contagiosa, scabies, ringworm, marginated dermatitis of the thighs and axillæ, alopecia areata, and verruca.

98. **Diagnostic Importance of Hemoptysis.**—The conclusions drawn by Bartlett from his study of hemoptysis are as follows: Bleeding from the upper air passages must be ruled out by careful inspection and history. It may occur in certain constitutional or blood diseases as merely another manifestation of the general tendency to bleed. Hemoptysis frequently occurs in broken compensation in heart disease and may occur in mitral stenosis as the only symptom of failing compensation. In such cases tuberculosis is frequently suspected; it is, however, rarely found. Ninety per cent. of all hemoptyses are due to pulmonary tuberculosis. As a rule

definite signs and symptoms are present. Not uncommonly, however, signs and symptoms do not develop for months or even years. Hemoptysis may occur in any ulcerating or eroding pulmonary disease. It should, therefore, be expected in abscess, gangrene, bronchiectasis or pulmonary cirrhosis. In such cases careful study of the signs and symptoms and frequent examinations of the sputum will usually suffice to rule out tuberculosis. Hemoptysis in pneumonia, bronchitis, asthma or following trauma should lead to the suspicion of an underlying tuberculous process. It is very doubtful if vicarious menstruation or hysteria can produce hemoptysis in normal lungs. Hemoptysis occurring without warning in young and healthy adults and passing off without the development of further signs or symptoms of tuberculosis is probably of tuberculous origin and should be so treated. Broncho-pulmonary hemorrhage without definite symptoms or signs of cardiac or ulcerative pulmonary disease is due in nearly every instance to tuberculous infection, which is merely another way of saying that hemoptysis should be considered as due to pulmonary tuberculosis unless proved to be due to some other cause.

99. Abstracted in THE JOURNAL, June 3, 1911, p. 1680.

Iowa Medical Journal, Des Moines

December 18, No. 6, pp. 261-306

102 Diphtheria Carriers and Medical Inspection of Schools. H. Albert, Iowa City.
103 Blood-Pressure in Pneumonia. A. Lambert, New York.
104 Myelocytic Leukemia. J. H. Peck, Des Moines.
105 Postoperative Treatment of Prostatectomy. L. W. Bremerman, Chicago.
106 Occult Blood in Diagnosis of Gastric Ulcer. J. T. Strawn, Des Moines.
107 Importance of Wassermann Reaction in Syphilis, Special Reference to Use of Salvarsan. W. E. Sanders, Des Moines.
108 Latest Theories on Cancer. S. R. Klein, Valhalla, N. Y.
109 Late Congenital Syphilis. E. R. Posner, Des Moines.
110 Malignancy. G. W. Hinkle, Harvard.

New York Medical Journal

December 16, XCIV, No. 1724, pp. 1209-1260

111 Psychologic Mechanisms of Paranoia. A. A. Brill, New York.
112 *Pathogenesis of Hypertrophic Pulmonary Osteoarthropathy. H. Brooks, New York
113 *Corrective Placement of Uterus: New Ventral Suspension. G. S. Foster, Manchester, N. H.
114 Certain Hemolytic Tests in Case of Blackwater Fever. C. Wellmann and C. C. Bass, New Orleans.
115 *New Diagnostic Reflex Sign in Typhoid. C. B. Burke, Atlantic, Iowa.
116 Enteroptosis and Altered Function of Diaphragm Resulting from Intrathoracic Inflammations. F. M. Pottenger, Monrovia, Cal.
117 Diphtheria Antitoxin and Anaphylaxis. J. A. Roddy, Philadelphia.
118 Value of Noguchi Reaction to General Practitioner. M. Lederer, New York.
119 Influence of Ipecac on Intestinal Amebiasis. D. Roberts, New York.
120 Relation of Salvarsan to Ear. S. Seegman, Pittsburgh.

December 23, XCIV, No. 1725, pp. 1261-1312

121 Sterility in Women. E. McDonald, New York.
122 *Tetanus; Seven Cases with Recoveries. P. Kintzing, Baltimore.
123 Present Status of Origin of Life Question. H. C. Bastian, London.
124 *Operative Treatment of Fractures. E. P. Magruder, Washington, D. C.
125 Evolution of Operating Table. F. Hartley and F. W. Murray, New York.
126 Report of Three Interesting Obstetrical Cases. S. J. Scadron, New York.
127 Hepatoptosis. A. F. R. Andresen, New York.
128 Treatment of Diphtheria Carriers by Overriding Infected Area with Culture of Staphylococcus Pyogenes Aureus. H. Page, Manila, P. I.
129 Diagnosis. A. M. Corwin, Chicago.

112. **Pulmonary Osteoarthropathy.**—It is suggested by Brooks that for the evolution of the changes characteristic of hypertrophic pulmonary osteoarthropathy, these factors are necessary: 1. Comparative youth; 2, the presence of lesions in the lung, pleura, or heart, most commonly the first mentioned, as a result of which there is an obstruction to the venous return or deficient pulmonary oxidation. That the changes are not purely the result of a septic intoxication is clearly shown by the fact that they do not appear in liver or splenic abscess, in osteomyelitis, chronic dysentery, or those numerous other conditions characterized by prolonged septic absorption, and Brooks is inclined to attribute a rather minor, though possible, rôle to the importance of the infectious processes, although they are present in most reported cases and doubtless where toxins, cryptogenic or metabolic, are circulating in the blood venous stasis and fibrous hyperplasia are favored, all well recognized tendencies, perhaps most familiarly exampled in syphilis and alcoholism.

113. **Placement of Uterus.**—In Foster's operation 2 inch-wide strips of peritoneum are used as suspending ligaments of the uterus. A ligature passed through the fundus of the uterus and through the fascia of the rectus muscle gives a temporary support.

115. **Reflex Sign in Typhoid.**—Burke describes the sign which many years ago was considered to be diagnostic of typhoid but soon was found present in other similar febrile conditions, i. e., a fibrillary contraction of that portion of the biceps muscle traversed by the thumb and finger, producing an oval ridge without complete contraction of the muscle. The ridge thus formed disappears slowly.

122. **Tetanus.**—The remedy employed by Kintzing was a solution of pure phenol of 10 per cent. strength, made by dissolving the deliquesced crystals in sterile water. This solution was then diluted to suit the case, generally to thirty or forty minims, and administered by hypodermic injections deep into the muscles; the dose being repeated at intervals of three hours in the beginning, increasing the interval as improvement manifested itself. The full adult dose employed was ten drops of this 10 per cent. solution, equaling practically one grain of pure crystalline phenol. As a precaution against soreness or suppuration Kintzing has sometimes diluted with sterile water half the stated amount, five drops, to the capacity of a twenty-five or thirty minim syringe, injected this into one buttock, following immediately with the remainder of the dose into the opposite buttock; the succeeding injection may be made into the deltoids or the pectoral muscles, if deemed advisable. However, when the entire dose, properly diluted (i. e., to forty minims) has been given in a single injection, no bad results have followed. The dose employed in the second case was five minims; in the sixth case, three and one-half minims, which was afterward increased to five minims. In fully developed cases the second dose is administered one hour after the first, the third being given after the lapse already stated.

The urine is carefully watched, and if the characteristic smoky color develops strongly Kintzing should consider it a signal for temporary cessation of the injections.

124. **Treatment of Fractures.**—Magruder holds that operation is indicated in the closed fracture of wide displacement and when correct apposition is otherwise impossible, provided hospital facilities can be obtained; in articular fractures when ankylosis threatens, and the best results are obtained after exact coaptation and suturing of the fragments. Massage, followed by early passive motion, gradually made active, should be the practice. When operation is indicated at all, the earliest operation is the best. The operative treatment of open fractures is that which most nearly reduces them to the type of the closed fracture, except as to drainage. Gunshot fractures should be treated like fractures of the open type in contact with street dust. That is to say, in addition to the usual treatment administer, as a precautionary measure, antitetanic serum. In all cases the most exact coaptation and retention of the fragments gives the most gratifying results. The ideal suture, in his opinion, is one strong enough to hold until union begins and then admits of its own absorption. The nearest approach to this is the sixty-day chromic catgut, which is unsafe and unsatisfactory in the presence of tension. The most trustworthy metal suture is the tinned steeled annealed wire. Wiring is the best operative method of treatment. Because of the dangers of an osteomyelitis the medullary canal should not be invaded if it can be avoided.

Louisville Monthly Journal of Medicine and Surgery, Ky.

December, XVIII, No. 7, pp. 193-224

130 Medical Aspect of Acute Abdomen. S. J. Meyers, Louisville.
131 Symptomatology and Treatment of Lobar Pneumonia. O. B. Demaree, Frankfort, Ky.
132 Management of Acute Appendicitis and Indications for Interval Operation. H. H. Grant, Louisville.

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Medical Record, New York

December 16, LXXX, No. 2145, pp. 1209-1258

133 Public and Medical Profession. J. Ewing, New York.
134 Preservation of Health in School Children. R. G. Freeman, New York.
135 Care of Crippled and Rachitic in Italy. D. C. McMurtrie, New York.
136 D'Arsonvalization in Treatment of Hypertension and Arteriosclerosis. W. B. Snow, New York.
137 *Unusual Case of Typhoid in Young Child. F. J. Barrett, New York.
138 Salivary Calculus of Wharton's Duct. E. H. Griffin, New York.

December 23, LXXX, No. 2146, pp. 1259-1308

139 Suggested Readjustment of Our Views on Heart Examinations for Life Insurance. C. F. Martin, Montreal, Canada.
140 Christian Science in Operation. H. D. Chapin, New York.
141 *Adequate Treatment of Gonorrhea. T. W. Jackson, Fort Hunt, Va.
142 Chronic Putrefaction Toxemia of Intestinal Origin. E. E. Cornwall, Brooklyn.
143 *Control of Measles. P. B. Brooks, Norwich, N. Y.
144 Treatment of Multiple Glandular Tumors. R. H. Boggs, Pittsburgh.
145 Transillumination. A. I. Benedict, Buffalo.
146 *Appendicular Abscess Followed by Phlebitis of External Jugular Vein. J. H. Richards, New York.

137. **Typhoid in Child.**—Barrett reports a case of typhoid in a child less than two years of age. There was intestinal hemorrhage, a symptom rarely seen in young children; the fever was remittent, and there was neither roseola nor splenic enlargement. There were, however, symptoms of meningitis with active delirium.

141. **Treatment of Gonorrhea.**—Fifteen cases of gonorrhea are cited by Jackson in which he employed injections and irrigations successfully. In the cases reported all individuals were considered as suffering from the disease so long as the Neisser organism was demonstrable either in the discharged urethral secretion or in the exudate or secretion obtained by gently drawing a sterile platinum loop over the exposed urethral mucosa within half an inch of the external meatus.

All injections were made with glass syringes of 10 c.c. capacity except in the case of argyrol. Solutions of this drug were instilled into the urethra with medicine droppers, the injections averaging 2 c.c. All injected solutions were retained in the urethra for five minutes. Irrigations were made with an apparatus consisting of a glass funnel and rubber delivery tube fitted with an urethral tip. All irrigating solutions were used warm. Formula for astringent "a"—Phenol, 0.325 gram; zinc sulphate, 2 grams; bismuth subnitrate, 4 grams; distilled water, 120 c.c. **Formula for** astringent "b"—Alum, 10 grams; phenol, 2 grams; distilled water, 500 c.c. The total number of cases receiving argyrol was 9; iodin, 8; silver nitrate, 3; astringents, 7, and boric acid, 1. The shortest case treated with argyrol only was fourteen days. The next shortest case (2) treated with iodin only was twenty-eight days. The next shortest case (3) treated with iodin only was thirty-four days. The average duration of fifteen cases was 82.6 days. The average duration of twelve uncomplicated cases was 75.75 days.

143. **Measles.**—It is Brooks' belief that present efforts to control measles do not give satisfactory results, chiefly because we permit the cases in the catarrhal stage to go undetected. He says that if it is to be controlled or prevented, it must be through isolation on the appearance of the first symptoms.

146. **Appendicular Abscess Followed by Phlebitis of External Jugular Vein.**—Not finding the appendix easily and being unwilling to break up the adhesions about the cecum, Richards did not remove the appendix but drained the abscess through the wound, sewing up the remainder of the incision. The drainage was free and on the third day following the operation the temperature was normal, and the bowels had moved well. No untoward symptoms developed until the eighth day, when the temperature rose to 105 and the pulse to 140. There was also a chill. The drainage was free and there were no signs of extending peritonitis. The drainage had a fecal odor, but not more so than at the time of the operation, and there was no fecal matter in the drainage. The patient complained of a stiff neck, with soreness in the left side of the neck. On the following day the pain in the neck was much more severe, so Richards examined this region more closely and found the external jugular hard like a cord, and very painful to the touch. Just above the clavicle there was some perivascular inflammation. Richards immobilized the head, and gradually the inflammation disappeared.

Lancet-Clinic, Cincinnati

December 9, CVI, No. 24, pp. 593-618

147 Plea for Earlier Diagnosis in Cancer. C. J. Cook, Indianapolis, Ind.
148 Surgery of Bronchus. B. M. Ricketts, Cincinnati.
149 Providing for Crippled Child. D. C. McMurtrie, New York.
150 Cancer Statistics and Their Meaning. I. S. Wile, New York.
151 Ancient Physicians and House Doctors. T. C. Minor, Cincinnati.

December 16, CVI, No. 25, pp. 619-644

152 Accidents and Injuries in Treatment of Eustachian Tube. W. E. Murphy, Cincinnati.
153 Infection of Gall-Bladder and Bile Tract; Surgical Treatment. W. Fuller, Chicago.

December 23, CVI, No. 26, pp. 645-670

154 Civic Medical Inspection of School Children, with Special Reference to Diseases of Eye, Ear and Throat. S. C. Ayers, Cincinnati.
155 Some Relations of Ophthalmology to General Medicine. G. H. Knapp, Cincinnati.
156 Appendix Open at Both Ends. J. F. Baldwin, Columbus, Ohio.
157 Ancient Cincinnati House Physicians and Interns. T. C. Minor, Cincinnati.

Cleveland Medical Journal

November, X, No. 11, pp. 881-968

158 *Ethics of Contract Medical Practice and Its Economic Advantage to the Community. R. E. Skeel, Cleveland.
159 *Economic Effect of Contract Medical Practice on Medical Profession. J. E. Tuckerman, Cleveland.
160 *Condition and Control of Contract Medical Practice in Other Cities of the Country. C. A. Hamann, Cleveland.
161 Contract Practice in Foreign Countries. W. B. Chamberlin, Cleveland.
162 Primary Syphilis; Advantage of Early Diagnosis, Diagnostic Measures and Treatment. C. L. Cummer and R. Dexter, Cleveland.
163 Proposed Deletions from Pharmacopeia. T. Sollmann, Cleveland.
164 *Typhoid Vaccine as Prophylactic in Typhoid. P. A. Jacobs, Cleveland.

158. **Contract Medical Practice and Community.**—Skeel points out that many forms of contract practice are not only ethical but economically necessary. Such forms include whole time service in sanitariums, state hospitals, municipal and state health departments, life insurance companies, etc., with a part time service as actual employes of corporations, manufacturing industries, etc., in which the employer pays for the service an adequate remuneration. Some forms are undesirable, such as contracts with lodges and other organizations which are in themselves good, but which pay their physicians so small a salary that his patients who ultimately pay the bill, do not receive adequate service. This should be righted if possible, but it is a very small mote in the eye of a profession which contains a number of fair sized beams that should be extracted before its vision is quite accurate. Some contracts are vicious both ethically and economically and they include all those in which the employer, who is a promoter, starts an organization with the direct end in view of collecting small fees from its members, promising adequate medical service in return, and who then hires the cheapest man he can obtain to trifle with the members' lives under his medical license. Such a medical man deserves no consideration whatever, no matter whether he is or is not in other respects a so-called ethical member of the profession.

159. **Contract Medical Practice and Medical Profession.**—There are two distinct elements entering into a consideration of the justice of so-called contract practice as distinguished from private practice. The first element is the ethical one. The second element is the economic one, with which Tuckerman's paper deals. The whole question here, he says, is one of adequate compensation. The compensation for contract work is inadequate in almost all instances considered, and it tends to become more and more inadequate through the economic pressure to which all laborers are being subjected, coincident with the development of large commercial interests. This condition has been allowed rapidly to come to the present

acute state through lack of knowledge of the ethics of medicine, professional jealousy, indifference of the older practitioners, the pernicious example set by some of the older and well-established practitioners, the overcrowding of the profession, the tolerance of this state of affairs by all medical societies, the commercialism of the age, and chief of all, the complete disorganization of the medical body. Whether the development of sanitation and the centralization of medical work is destined to reduce the number of physicians necessary to maintain health in our communities, Tuckerman regards as immaterial. It is, however, of vast economic importance, he says, that the profession address itself seriously to the problem of adequate compensation for those of its members who are destined to continue in the practice of medicine, or that shall hereafter enter on it, irrespective of whether their activities are in public or private fields.

160. **Contract Medical Practice in Other Cities.**—In gathering the material for his paper Hamann says he has come more and more impressed with the growth of contract practice in all its forms, government, state, municipal, lodge and fraternal and private organizations. Medical socialism, so to speak, is progressing rapidly in this country. It is important for the medical profession to discuss the subject fully. For the younger men already in the profession and for those who are students or are contemplating a medical career there is a particular need of careful consideration of the problems involved, for on the mode of solution of these problems will depend much of their future. He has also gathered the impression that contract practice has come to stay, that in some form or forms it is a necessary economic institution, and that, therefore, we must adapt ourselves and submit to the inevitable, only let us try to establish such conditions in the way of appointments, control and compensation that the standing of the profession will be maintained at its proper level in all respects.

164. **Vaccines in Typhoid.**—Jacobs says that since 1904, 60,000 men have been vaccinated against typhoid in India. Over 7,000 in Southwest Africa and over 14,000 in the United States. In no case has any harm followed its use. The time has come when this means of prevention against typhoid should be extended, not only in the military service, but among the civil population as well.

Woman's Medical Journal, Cincinnati

November, XXI No. 2, pp. 247-252

165 The Mysterious Phenomena of Matter and Mind. G. P. Murray, New York.
166 Pathologic Anatomy of Amentia. M. M. Shick, Elwyn, Pa.
167 Responsibility of Medical Women of the United States to Women of Non-Christian Lands, and How We Are Meeting It. M. H. McLean, St. Louis.
168 The Menstrual Cycle, Its Physiology and the Preparation of the Young Girl for Its Advent. E. S. Brown, New York.

December, XXI, No. 12, pp. 261-284

169 Serological Aspect of Syphilis. D. O. Robinson, New York.
170 Instruction of Teachers in School Hygiene. G. M. Whipple.
171 Résumé of Loco-Disease. M. Gage-Day, Kingston-on-the-Hudson, N. Y.
172 Value of Corrective Gymnastics. M. K. Wallin, New York.
173 Menopause. M. D. Rushmore, New York.

Annals of Otology, Rhinology and Laryngology, St. Louis

September, XX, No. 3, pp. 511-756

174 Examination and Treatment of Eustachian Tube by Aid of Nasopharyngoscope. E. M. Holmes, Boston.
175 Actual Cautery in Treatment of Localized Tuberculous Lesions. G. B. Wood, Philadelphia.
176 More Efficient Methods of Aural Massage. A. Randall, Philadelphia.
177 Are the Tonsils a Menace or a Protection? H. L. Swain, New Haven.
178 Technic of Tonsillectomy. J. M. Ingersoll, Cleveland.
179 Relation of Enlarged Tonsils to Endocarditis. A. C. Getchell, Worcester, Mass.
180 Cases of Late Secondary Hemorrhage After Tonsillotomy. F. E. Hopkins, Springfield.
181 So-Called Conservative Mastoid Operation with Description of Technic of Heath, Bondy and Siebenmann. G. L. Richards, Fall River, Mass.
182 Injections of Blood Serum for Hemorrhage, Either Spontaneous or Postoperative. C. F. Theisen, Albany.
183 Intracranial Lesions Complicating Acute Aural Disease. S. M. Smith, Philadelphia.
184 Etiology of Otosclerosis. W. S. Bryant, New York.
185 Case of Rarefying Ostelitis of Mastoid Bone. C. W. Richardson, Washington.
186 Blood Cultures in Otology. F. E. Sondern, New York.
187 Supernumerary Auricle Associated with Chronic Suppurative Otitis Media. H. Hays, New York.
188 Case Report of Extirpation of Larynx. R. H. Craig, Montreal.
189 Six Cases of Acute Suppurative Otitis Media in One Family with Complications. H. Hays, New York.
190 Mucocele of Nasal Accessory Sinuses; Report of Three Cases (Ethmoid, Maxillary Antrum, Frontal), with Tabulation of Thirty-Seven Cases. H. Hastings, Los Angeles.
191 Anatomy and Physiology of Salivary Glands. R. J. Held, New York.
192 Symptoms and Diagnosis of Diseases of Salivary Ducts and Glands. R. C. Myles, New York.
193 Treatment of Diseases of Salivary Apparatus. J. C. Beck, Chicago.
194 Fibroma of Nasopharynx, with Report of Four Cases. W. B. Chamberlin, Cleveland.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 9, No. 2658, pp. 1547-1576

1 Surgery of Abdominal Wall. A. P. Gould.
2 Certain Operative Procedures in Paralysis of Children. R. Jones.
3 Neurotic Dyspepsia. G. Rankin.
4 Radium in Malignant Disease and Varicose Ulceration. T. R. MacDonald.
5 Case of Rodent Ulcer Presenting Some Unusual Features. R. Farrant.
6 *Bacteriology of Cockroach. C. C. Morrell.

6. **Bacteriology of Cockroach.**—Morrell believes that the common cockroach is able by contamination with its feces (1) to bring about the souring of milk, (2) to infect food and milk with intestinal bacilli, (3) to transmit the tubercle bacillus, (4) to disseminate pathogenic staphylococci, (5) to transmit from place to place destructive molds. These facts, taken in conjunction with the life-habits of the insect, lead to the conclusion that the cockroach is able to, and may possibly, play a small part in the dissemination of tuberculosis and in the transmission of pyogenic organisms; that the insect is in all probability an active agent in the souring of milk kept in kitchens and larders; and that it is undoubtedly a very important factor in the distribution of molds to food and to numerous other articles, especially when they are kept in dark cupboards and cellars where cockroaches abound.

Lancet, London

December 2, CLXXXI, No. 4605, pp. 1535-1604

7 Unicellula Cancri: Parasite of Cancer. H. Butlin.
8 First and Last Kink in Chronic Intestinal Stasis. W. A. Lane.
9 *Association of Hysteria with Malingering. F. P. Weber.
10 Acute Osteomyelitis of Vertebræ. F. Fraser and T. McPherson.
11 Lead Bullet Removed from Metatarsal Bone After Twenty-Three Years. J. R. Christopherson.
12 Lymphatics of Scrotum. J. Morley.
13 *Systolic Blood-Pressure in Diseases of Heart. V. T. Korke.
14 Specific Gravity of Blood from Clinical Aspect. A. Ross.

December 9, CLXXXI, No. 4606, pp. 1605-1676

15 Intrathoracic Tumors and Aneurysms in Their Clinical Aspect. G. Steell.
16 Early Signs and Symptoms in Nervous Disease. J. Taylor.
17 Venereal Disease: Its Present and Future. D. White and C. H. Melville.
18 *Treatment of Exophthalmic Goiter with Milk of Thyroidless Goats. W. Edmunds.
19 *Enuresis and Thyroid Extract. A. C. D. Firth.
20 Use of Rosenbach Tuberculin in Surgical Tuberculosis. F. J. Rosenbach.

9. **Hysteria and Malingering.**—In a brief exposition of what he calls the phylogenetic or evolutional conception of hysteria, as being due to an exaggeration (or disorder) of tertiary (nervous) female sex characters, Weber endeavors to explain why hysteria (according to his conception of hysteria) is so frequently associated with a tendency to simulate disease, accident or injury, or deceive in some kind of way in the absence of any adequate (rational) motives. He claims that the so-called tertiary (nervous) female sex characters, though naturally best marked and most striking in the female sex, are not the exclusive property of the female sex. They occur likewise, though they are usually less conspicuous, in the male sex and it is by their occasional exaggeration(or disorder) that Weber explains the occurrence of hysterical and irrational (apparently motiveless) deception and simulation ("hysterical malingering") in males. Teleol-

ogy (that is to say, the modern Darwinic or evolutional idea of teleology) finds a place in the phylogenetic aspect of hysteria and it seems to Weber also to claim a place in regard to other conceptions (Babinski, Freud, Janet and others) of hysteria. For instance, he asks, is it not conceivable that hysterical excessive suggestibility may, on the whole, be useful rather than harmful for persons whose own will-power is pathologically deficient? Moreover, in cases in which wretched experiences have made their psychical marks or "psychical traumata" in the past and in which the present condition is in some way gravely affected by subconscious reminiscences, "separation of consciousness" may be supposed to bring not only inconveniences and dangers, but also a certain kind of relief.

Some functional nervous symptoms usually classed as hysterical are not readily explained by Weber's conception of hysteria. So-called "hysterical vomiting" seems to be a pathologically exaggerated action of the reflex defensive mechanism by which poisonous or irritating ingesta are normally rejected. But it may sometimes be on the borderland between hysteria and voluntary action simulating disease. Furthermore, Weber continues, in regard to the greater frequency of simulated diseases, self-inflicted skin lesions, etc., in women than in men it may be remembered that when a woman is depressed and altogether discontented with the life she has to lead, she is more likely than a man would be to try to attract attention or pity by simulating disease or injury. A man usually has much more open to him; he can seek a new country or (if he does not endeavor to obtain relief by drink or gambling) he can take part in dangerous ventures of various kinds which bring excitement and temporary relief.

13. **Systolic Blood-Pressure in Heart Diseases.**—The observations recorded by Korke were made on patients suffering from: (1) simple, uncomplicated valvular lesions of the heart due to acute rheumatic endocarditis; (2) valvular lesions due to other causes; and (3) other heart affections. No systematic complications were observed in cases of valvular lesions due to rheumatic endocarditis. There were no cyanosis, dyspnea, changes in the fundus oculi, febrile temperature and albuminuria, though traces of albumin were sometimes detected in a few cases. The observations were made on patients of both sexes, of different ages. They were allowed a mild out-door exercise and generally they were keeping in good health. The apparatus used for the observations was a sphygmomanometer, a Martin's modification of Riva-Rocci. The systolic blood-pressure was recorded by the armlet method during the recumbent posture of the patients. The observations were made daily, under similar circumstances, nearly an hour before dinner (at 1 p. m.) and in cases of doubt they were repeated two to three hours after 8 p. m. A record of pulse-rate and number of respirations was kept during the observations, and sphygmographic tracings of the pulse were often made to note the effect of blood-pressure on the pulse. In valvular lesions of the heart (with or without complications), due to rheumatic endocarditis and other causes, the blood-pressure was found to be normal or above normal. In simple and uncomplicated valvular lesions of the heart, due to acute rheumatic endocarditis, the blood-pressure was found always to be normal or above normal. In aortic incompetence complicated with anginal attacks, the blood-pressure was found to be subnormal during the interparoxysmal periods. As to the significance of high blood-pressure in simple and uncomplicated valvular lesions of the heart due to rheumatic endocarditis: The high blood-pressure observed in some of the cases is, Korke believes, a physiologic compensation in those individuals, though it may be mistaken for a pathologic state. The blood-pressure in cardiac muscle failure was normal or well above normal. In valvular lesions, complicated with chronic nephritis, and arteriosclerosis, the significance of supernormal blood-pressure requires no comment. It is distinctly pathologic.

18. **Treatment of Exophthalmic Goiter.**—Edmunds maintains that the effect (if any) of the treatment of exophthalmic goiter with the milk from thyroidless goats or preparations made from it must depend in a considerable degree on the dosage. Clearly a sufficient dose must be given. One of the preparations is said to be made by mixing the dried milk with an equal quantity of sugar of milk, which is added as a preservative; 1 ounce of dried milk would correspond with about 4 ounces of the whole milk. If, then, 1-dram doses of the mixed powder were given, each dose would correspond to 2 drams of fresh milk; and if the doses were ordered three times a day, they would correspond to 6 drams, or possibly 1 ounce, of the milk a day. But when the fresh milk is given it is usual for the patient to take the whole yield of one goat, which may be a pint or a quart a day; sometimes a liter (35 ounces) is prescribed. In one of the cases recorded by Edmunds, the patient was taking at one period 2 quarts of the milk a day; if, he says, this is anything like the right dose (and it certainly did no harm), 3 drams of the powder would be much too small.

19. **Enuresis and Thyroid Extract.**—Firth treated twenty-eight unselected and consecutive cases of enuresis with thyroid extract. The children attended hospital once weekly, and, as far as possible, no change was made in their mode of living while the thyroid extract was being administered. Adenoids were not removed, although this has been done in several cases since, and no anthelmintic was ordered in cases harboring threadworms. When the mothers had been in the habit of "lifting" the children on retiring themselves, they were instructed to continue the practice, but where it was not done, this method of treatment was not recommended. Of the twenty-eight cases, sixteen showed a marked improvement or were cured, and twelve did not improve at all. The cases which appear to react to this form of treatment better than all others are those in which the enuresis has persisted since birth, and in which the patients are also backward. Of sixteen cases in which the enuresis started during childhood, six out of the ten improved were backward compared with two out of six not improved. The initial dose was one-fourth or one-half grain daily, and the rate of increase varied much, as the work was experimental; often the dose was increased every fourteen days. In some cases which showed improvement, but in which the condition had become stationary, the same dose was continued for a month or more.

Clinical Journal, London

November 15, XXXIX, No. 6, pp. 81-96

21 Case of Aspiration of Fragment of a Tooth into Left Bronchus. W. Murrell.
22 Slight Strokes. S. T. Preen.

November 22, XXXIX, No. 7, pp. 97-112

23 Causes of Convulsions in Infancy and Childhood. E. Pritchard.
24 Case of Hemochromatosis. R. Miller.
25 Parotid Tumors. A. H. Todd.

November 29, XXXIX, No. 8, pp. 113-128

26 Alcoholic and Syphilitic Affections of Heart. W. H. White.
27 Some Affections of the Optic Nerve in Relation to Medicine and Surgery. D. L. Davies.
28 Nervous Diseases in Children. J. P. Parkinson.

December 6, XXXIX, No. 9, pp. 129-144

29 Practical Points in Rectal Surgery. Sir F. Wallis.
30 Treatment of Middle-Ear Disease by Hot Medicated Air. A. Wylie.
31 Phlebotomus Fever. F. M. Sandwith.
32 Case of Caries of Frontal and Intracranial Abscess Due to Bacillus Typhosus Eleven Years After an Attack of Typhoid. W. R. Gore.

Indian Medical Gazette, Calcutta

November, XLVI, No. 11, pp. 409-448

33 Andamans: The Prevalence of Malaria and Its Adverse Effect on Health of Convicts. J. M. Woolley.
34 Operations Performed for Suppuration in Pelvis During Last Twelve Months. C. C. Barry.
35 Subluxation of Penis. N. Rahnler.
36 Thanatophida. A. B. deCastro.
37 Nastin Treatment of Leprosy. P. Das.
38 Case of General Paralysis. A. Cochrane.
39 Puerperal Eclampsia with Recovery: Morphin Treatment or Accouchement Forcé. L. G. Fischer.
40 Cases of Fibroma Molluscum, Removal of Tumors in One Weighing Sixteen Pounds Ten Ounces, with Recovery. C. R. Chetti.
41 Case of Molluscum Fibrosum. L. B. Scott.

Medical Press and Circular, London

November 15, XCII, No. 3784, pp. 513-540

42 Deformities of Face and Upper and Lower Jaws Due to Nasal Obstruction. M. Collier.

43 *Treatment of Mucous Colitis (Colica Mucosa) in Children. F. Hernaman-Johnson.
44 Acute Abdominal Cases in General Practice. H. E. Barnes.
45 Syphilis. H. C. French.

November 22, XCII, No. 3785, pp. 541-566

46 General Medical Treatment of Early Cases of Insanity. R. Jones.
47 Diagnosis and Treatment of Tuberculosis of Urinary Tract. E. H. Fenwick.
48 Tuberculosis of Urinary Tract. F. R. Douglas.
49 Syphilis. H. C. French.
50 Influence of Alcohol on Body Temperature and on Heart. G. S. Woodhead.

November 29, XCII, No. 3786, pp. 568-592

51 Treatment of Pruritus. G. Milian.
52 *Use of Spinal Anesthesia in Prostatectomy. R. A. Stoney.
53 Dull and Backward Children. A. F. Tredgold.

December 6, XCII, No. 3787, pp. 593-622

54 Influence of Upper Air-Tract on Respiration. P. Watson-Williams.
55 *Influence of Menses on Onset and Frequency of Epileptic Fits. W. Alexander.
56 Anaphylaxis. G. Mellhiere.
57 Tubercular Laryngitis in Infant of Seventeen Months. J. M. Hunt.

43. Treatment of Mucous Colitis.—Colitis mucosa in the adult Hernaman-Johnson considers essentially a neurosis. It is generally associated with constipation, but attention to this often fails to effect a cure. Nor does the surgical removal of some obvious offence, such as chronically inflamed appendix, by any means invariably meet with success. Its coming has been a gradual process, dating from childhood or adolescence. In the former period prevention is easy and cure can be accomplished by the means at the disposal of the ordinary practitioner. During early youth the causes are more subtle, tend to become mental rather than physical, general rather than localized in the gut itself. The disease now calls for special therapeutic measures, but it is still usually possible to ward off any serious consequences. As a general proposition, colica mucosa up to the age of 15 should be prevented and can be cured.

52. Spinal Anesthesia in Prostatectomy.—Though Stoney does not consider that spinal anesthesia should replace general anesthesia with ether or chloroform in general surgery, he thinks that it might be used with advantage in a large number of cases of prostatectomy. In fact, it should be looked on as the normal procedure in this particular operation. He reports a case in which this method of anesthesia was used. The special points of interest in this case are two: First, the unusually slight hemorrhage, both during and after the operation; the amount of bleeding was extraordinarily slight, all tinging, even, of the urine, having ceased within thirty hours of the operation. The absence of hemorrhage Stoney attributes partly to the absence of venous congestion caused by a general anesthetic, but chiefly to the action of the small quantity of adrenalin added to the novocain. Second, the absence of any aggravation of the condition of the heart or lungs. The pulse remained practically the same after as before operation, and the bronchitis, though severe at the time of operation, was not made any worse. Stoney is convinced that if a general anesthetic had been used the result must have been fatal.

55. Influence of Menses on Onset and Frequency of Epileptic Fits.—Of the 1,000 monthly records examined by Alexander, 235 have a record of menstruation, but not attack. In eighty-nine periods the number of attacks during the menstrual period and the intermenstrual period was the same. In 335 periods the number of attacks in the menstrual fortnight was in excess of the intermenstrual fortnight. In 342 periods the number of attacks in the intermenstrual period was in excess of those of the menstrual period. In those months where no attacks occurred and in those months where an equal number of attacks occurred, Alexander thinks it may be assumed that menstruation had no influence in promoting attacks. Adding to these those months where a greater number of attacks took place at the intermenstrual period, $342 + 89 + 235 = 666$ months where menstruation had no effect in increasing the frequency of attacks, against 334 months where it may have had such an effect. Is the onset of the menses usually ushered in by a fit? The day of the onset of the menses is marked for years in his books, and if its onset had any great effect in producing a fit the records should show a greater frequency at these times. Alexander then marked off those months in which no fits occurred on the day that the menses appeared, as well as on the day before and the day after, and compared the number in which these three days were free from attacks with the number in which fits occurred on any of the three days. In 510 months he found that no fits occurred on any of the three days, and in just one-half, or in 255 months, examined did any fits occur at that time. In many of these latter cases the fits had occurred sporadically all over the month, and, he says, it would have been strange if they had not occurred frequently at the menstrual time also. In a few cases it was thought probable that the menses had something to do with the onset of a series of attacks that appeared to be coincident with the onset of the menses, but in the same patients, in probably the next or in a subsequent month, a similar series of attacks occurred in the intermenstrual period and the menstrual period was free. In sixty-five cases, or 17.6 per cent., the disease began well after the periods had commenced and the influence of puberty had disappeared. In only 103, or 26.9 per cent., did the disease begin during the period between the ages of 10 and 20 years, a most generous allowance of time for the influence of puberty and of the onset of menstruation to assert themselves. In not more than half a dozen of 382 women examined are the menses blamed for the onset of epilepsy by those who filled up the admission papers. The establishment of the monthly period, then, has usually no definite relation to the frequency or severity of attack, and in the majority of female epileptics the seizures do not occur immediately before or after the menstrual perior, nor is there usually any augmenation in their number or severity at these times.

Australian Medical Journal, Melbourne

October 14, I, No. 13, pp. 135-146

58 Obstetrics and Gynecology. G. R. Adam.
59 Volvulus of Small Intestine. H. A. S. Newton.
60 Two Cases of Tetanus. M. Williams.

October 21, I, No. 14, pp. 147-158

61 Postpartum Hemorrhage. J. W. D. Hooper.
62 Fatal Jaundice of New-Born: Five Cases in One Family. J. N. Morris.

October 28, I, No. 15, pp. 159-170

63 Treatment of Fractures. R. H. Russell.

November 4, I, No. 16, pp. 171-180

64 Collapse and Shock. E. H. Embley.

Dublin Journal of Medical Science

December, III, No. 480, pp. 469-488

65 Need of Medical Inspection of School Children in Ireland. O. S. Gogarty.
66 An Obscure Case, Simulating in Some Respects One of Henoch's Purpura. B. C. A. Leeper.

Annales de Gynécologie et d'Obstétrique, Paris

November, XXXVIII, No. 11, pp. 625-687

67 *The Ultimate Fate of the Prematurely Born. (Avenir éloigné du prématuré.) V. Wallich and A. Fruhinsholz.

67. The Fate of the Prematurely Born.—Wallich and Fruhinsholz have applied in their research what they call the centrifugal and centripetal methods, that is, both ascertaining the later history of the prematurely born infants, and tracing back to birth the history of older children or adult patients. The earliest known history of the kind is that of a professor at Padua in the sixteenth century who was born at the seventh month and lived to be 80. Among other famous "prematures" mentioned are Newton, Rousseau, Voltaire, Cuvier, Victor Hugo, Lamartine and Renan. The compilations that have been published on the subject are reviewed and a personal compilation tabulated, including 143 infants born before term of presumably healthy parents, and whose history has been traced into adult life. The outcome is shown to depend in large measure on the weight at birth, that is, the degree of development. Of seventeen infants weighing from 900 to 1,500 gm., 41.1 per cent. have developed into normal adult life and a similar percentage are only slightly handicapped (*avenir laissant à désirer*), while the rest are much below the normal standard; of the 25 weighing from 1,500 to 2,000 gm., 52 per cent. are normal and 36 slightly handicapped; of the 36 between 2,000 and 2,500 gm., 75 per

cent. are normal and 22.2 per cent. slightly handicapped, while of the 65 weighing between 2,500 to 3,000 gm., 78.4 per cent. are normal and 20 per cent. only slightly handicapped. Among the total twenty-seven slightly handicapped infants, trauma from an obstetrical operation may have cooperated in eleven cases; five other infants were the first born. Tracing back the history to birth of 1,804 patients in Broca's children's surgical service, and of 620 inmates of the asylum for epileptics and feeble-minded, showed that over 12 per cent. of the former and over 8 per cent. of the latter are known to have been prematurely born. A large proportion of the prematurely born are thus shown to develop normally both in mind and body, while others present various signs of degeneracy, hernia, club-foot, incontinence of urine and nervous disturbances, these signs of degeneracy apparently linked with the earliness of the birth and the violence of the obstetrical trauma. On the other hand, the research shows a large proportion of prematurely born among the degenerates in institutions, and that degeneracy in general is traceable as a rule to syphilis or alcoholism in the parents or to the earliness of the birth and the fact that the infant was the first born. The authors' final conclusion is the importance of refraining from bringing on the birth before term by overwork or trauma from sexual intercourse.

Bulletin de l'Académie de Médecine, Paris

November 28, LXXV, No. 39, pp. 241-260

68 Mental Disturbances Following Operations. (Les psychoses chirurgicales d'origine infectieuse; la stupeur primitive des opérés.) L. Picqué and Le Dentu.

69 Elimination of Chlorids in Course of Acute Dysentery. (Les chlorures et la crise dans la dysenterie aigue nostras épidémique.) L. E. Bertrand.

Presse Médicale, Paris

November 25, XIX, No. 94, pp. 969-980

70 Histopathology of the Thyroid. (Introduction à l'étude histopathologique du corps thyroïde. Lésions élémentaires.) G. Roussy and J. Clunet.

71 Dwarf Growth with Hypophysis Tumor. (Nanisme hypophysaire.) R. Burnier.

72 Improved Technic for Eck's Fistula in Experimental Research. (Nouvelle technique de la fistule d'Eck.) A. Frouin.

November 29, No. 95, pp. 981-988

73 *Intermittent Claudication of the Spinal Cord. (La claudication intermittente de la moelle épinière.) Dejerine.

74 Antityphoid Vaccination. (Vaccination antityphique. Efficacité des vaccins polyvalents: vaccin par autolyse et vaccin bacillaire.) H. Vincent.

73. **Intermittent Claudication of the Spinal Cord.**—Dejerine says that the condition to which he applies this name is usually the precursor of confirmed spasmodic paraplegia, and its recognition is therefore important as appropriate treatment may ward off the latter. There are no necropsy findings on record, but from analogy with peripheral intermittent limp, we can assume that the trouble results from an arteritis gradually obstructing the lumen of the arteries supplying the segments of the spinal cord involved. A similar clinical picture can be induced in a guinea-pig by compressing with the thumb the aorta against the spine. After a few seconds the hind legs first hang limp and then are completely paralyzed for a few minutes, but they speedily return to normal as the circulation is restored. In the clinic a syphilitic origin is almost invariably discoverable and points the way to successful treatment; in only one case in his experience was influenza the only infection in the case-history. He reports a case in detail; the patient is a woman of 37 who noticed that her left leg tired easily and felt heavy and she had to rest it frequently for a few minutes. After three years the same symptoms were noticed in the right leg, both feeling as if the shoes were as heavy as lead. The intervals between the necessity for resting the legs in walking have grown constantly shorter, and there are vague cramps in the legs but no decided pains. The muscles, pupil reflexes and motor functioning are normal but the tendon reflexes are exaggerated and the sphincters do not behave quite normally, as there is intermittent retention of urine and stools, but there is no cyanosis, pain or chilliness in the legs so that the peripheral forms of intermittent claudication must be excluded. On the other hand, the exaggeration of the tendon reflexes and the sphincter disturbances show that the trouble is the result of an insufficient blood-supply to a certain segment of the spinal cord. During rest the supply is adequate but not when the legs are being exercised. Remarkable benefit is liable with treatment based on the suspicion or certainty of syphilitic antecedents in such cases. This alone will ward off the otherwise almost inevitable spastic paraplegia; the interval before development of the latter may be very long, over sixteen years in one of his cases.

Semaine Médicale, Paris

December 6, XXXI, No. 49, pp. 577-588

75 Passage of Cholesterin into the Blood in Acute Infections. (Evolution de la cholestérinémie au cours des infections aigues.) A. Chauffard.

76 Lane's Kink of the Ileum and Jackson's Membrane. (La coudure iléale d'Arbuthnot Lane et la péricolite membraneuse de Jackson.) F. Lejars.

77 Plague and Yellow Fever at the Recent International Sanitary Conference. (Rapport de la sous-commission de la peste.) A. Calmette. (Rapport de la sous-commission de la fièvre jaune.) A. Agramonte.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXI, No. 2, pp. 117-246. Last indexed Nov. 25, p. 1805

78 *Prognosis of Tuberculosis in Young Infants. (Zur Prognose der tuberkulösen Infektion im frühen Säuglingsalter.) J. Ibrahim.

79 *Course of Tuberculin Reactions During Day and Night. (Verlauf von Tuberkulinreaktionen bei Tage und bei Nacht.) R. Hollmann.

80 *Improved Technic for Induced Pneumothorax. (Zur Pneumothoraxtherapie. (Intrapleurale Injektionen physiologischer Kochsalzlösung.) I. Holmgren.

81 *The Menstrual Fever of Tuberculous Women. (Ueber das menstruelle Fieber tuberkulöser Frauen—mit Berücksichtigung gewisser pathologischer Erscheinungen.) K. Dluski.

82 The Diazo Reaction in Pulmonary Tuberculosis. (Die prognostische Bedeutung der quantitativen Bestimmung der Diazoreaktion bei der Lungentuberkulose.) A. Hatzfeld.

83 *Early Diagnosis of Pulmonary Tuberculosis. (Zur Frühdiagnose der Lungentuberkulose.) F. Walterhöfer.

84 Women's Clothing and Tuberculosis. (Frauenkleidung und Lungentuberkulose.) F. Bell.

85 *Tubercle Bacilli in the Blood. (Tuberkelbazillen im Blute von Tuberkulösen.) Sturm.

78. **Prognosis of Tuberculosis in Infants.**—Ibrahim remarks that the outlook for tuberculosis in young infants has been shown lately to be more favorable than was accepted even six years ago. Czerny has found that infants with tuberculous processes in the skin, bones and peripheral lymph-nodes generally survive, while those with tuberculosis of the internal organs generally succumb. Pollak has recently reported three cases of children now over 1 year old who gave a positive tuberculin reaction before they were 6 months old, and Bahrdt has published a similar case. Ibrahim then reports the details of a case in which an infant contracted tuberculosis during the first five weeks, its mother being a moribund consumptive. The child was then transferred to a healthy environment but the Pirquet reaction was positive and cutaneous tuberculids developed, but the child has grown strong and shows no trace of tuberculosis or of the exudative diathesis now, as it is approaching the end of its second year. The only treatment it received was a course of Fowler's solution for two months.

79. **Tuberculin Reactions in Daytime and at Night.**—Hollmann has been comparing the findings in 188 patients given the tuberculin test at evening, sixty-eight in the morning and sixteen both morning and evening, a total of 626 tests, of which 464 were evening tests. The tabulated findings show that the reaction after the injection occurs more rapidly in the morning than at night. The difference with a mild reaction is over eight hours, with a moderate reaction over six, and with a powerful reaction nearly four hours later when the injection is made in the evening. The milder the reaction the greater the difference. The difference was about the same when the same patient was injected morning or night. Hollmann concludes from the facts observed that the action of the daylight is an important factor, saying that the importance of light as a catalytic factor is becoming recognized more and more in research on various biologic processes.

80. **Artificial Pneumothorax.**—Holmgren has found it possible to induce therapeutic pneumothorax in cases in which it otherwise would have been impossible, by preparing a cavity for reception of the gas. This he accomplishes by preliminary injection of physiologic salt solution between the sheets of the pleura. He has never witnessed any harm from this pro-

cedure, and reports two cases to show the great benefit possible by its aid, influencing even extensive adhesions, stretching or loosening them sufficiently to permit effectual compression of the lung by a pneumothorax.

81. **Febrile Menstruation in the Tuberculous.**—Dluski found no influence on the temperature during menstruation in 56 per cent. of 300 women examined during several months. In the others the temperature proved extremely variable during menstruation even in the same women. There was no special type, and his experience does not indicate that fever during menstruation is necessarily a sign of tuberculosis. Only when the temperature recurs regularly and reaches a higher point month after month is the prognosis unfavorable. The question of the temperature during menstruation is complicated and requires research on the ovarian secretion and its action on different organs and the connection between febrile menstruation and the course of the tuberculosis.

83. **Early Diagnosis of Pulmonary Tuberculosis.**—Walterhöfer states that during the years 1909 and 1910, 88 and 78 of the 933 and 842 patients admitted to the Wilhelmsheim sanatorium proved to be free from the assumed tuberculous lung lesion. The diagnosis had been incorrect and he discusses the premises on which it had been based. The subcutaneous tuberculin test is the only reliable one of all the diagnostic means at our disposal, he says, adding that the reaction has to be considered from the point of view of the active or latent condition of the process; the focal reaction is the criterion for this. It was determined by auscultation in 91.67 per cent. while in only 8.33 per cent. did percussion give reliable findings. Any change in the room or in the patient's attitude or muscle tone may influence the auscultation findings. He remarks that Pottenger's rigidity of the muscles is of no appreciable avail for early diagnosis. Walterhöfer has the patient sit on a high chair with a low back, convenient for both the examiner and the examined. Examination in bed is entirely unreliable. The hearing of the examiner should be at its best, as fatigue and emotions aid in reducing the auditory capacity. Where all conditions for such auscultation and percussion are not available, it is futile to seek for a focal reaction after injection of tuberculin. He does not lay much stress on a febrile reaction alone. A history of hemoptysis or night sweats is not to be relied on in patients who are longing for a free course of sanatorium treatment. When the temperature in the rectum is found high after exercise and keeps high for over an hour, tuberculosis may be suspected although it must be borne in mind that the obese, convalescents, and those with unstable nervous system are liable to have a variable temperature at all times. The one unfailing sign of an active process is the local reaction in the diseased lung after a subcutaneous injection of a small dose of tuberculin, the appearance of râles or exaggeration of previous findings.

85. **Tubercle Bacilli in the Blood.**—Sturm found tubercle bacilli in the blood in only 46 per cent. of 50 tuberculous men, including five of ten in the first stage of tuberculosis, six of sixteen in the second and twelve of the twenty-four in the third. These findings do not agree with those of Kurashige who found tubercle bacilli in the blood of every one of 155 tuberculous patients in various stages. Sturm adds that he found tubercle bacilli in the urine in 50 per cent. of all cases. He never found tubercle bacilli in the blood of the ten healthy persons examined, while Kurashige reported positive findings in the blood of 59 per cent. of thirty-four supposedly healthy persons (*Sei-i-kwai*, 1911, xxx, 69, and *Ztschr. f. Tub.*, xvii, 4).

92 **Artificial Leeches.** (Ueber lokale Blutentziehungen.) A. de Cortes.
93 **Paracelsus as Therapeutist.** P. Schenk.
94 **Eye Disturbances in Diseases of Deranged Metabolism.** (Augenerkrankungen bei Stoffwechselkrankheiten.) K. O. J. Helbron.

86. **Paget's Disease of the Nipple.**—Kreibich states that this affection is a flat melanosarcoma.

87. **Heart Defects and Pregnancy.**—Rosenthal remarks that we have absolutely no criterion as to how much a diseased heart can stand, and reports two cases in which the most serious symptoms were observed at term of a pregnancy, intense dyspnea and cyanosis of the entire body, or extreme edema. The women were artificially delivered at once by anterior colpohysterotomy without general anesthesia, after which the symptoms subsided. Both women had borne children before and one this time had twins, the two twins weighing nearly 15 pounds; both women recuperated to fairly good conditions.

88. **Hodgkin's Disease.**—In a previously healthy young man, chills, fever and general indisposition developed suddenly, followed by enlargement of glands, until the patient presented the typical picture of Hodgkin's disease. The liver and spleen fluctuated in size with the recurring fever, and there was moderate anemia. The disease proved fatal in seven months, after two periods of collapse one and two months before death. No infectious germs were discovered during life but Much's rods and granula were found in the lesions.

90. **Ureter Stones.**—Weiss was able to dislodge and expel to spontaneous expulsion of the two stones by injecting warm glycerin into the ureter.

91. **Optic Neuritis After Salvarsan.**—Cohen states that in the first of his two cases, the very protracted and ultimately unfavorable course in the eye first involved, the involvement of both eyes, the lack of influence of mercurial and iodid treatment on the optic neuritis while the complicating uveitis rapidly healed under it, and the features of the defect in the field of vision—a constant central blue-green scotoma, with intact periphery—all these features distinguish the case from an ordinary recurrence of manifestations of the syphilis in the nervous system. The same features of the defect in the field of vision were observed in the second case although the optic neuritis was not so severe. The salvarsan had been injected by the intramuscular route in the first and by the intravenous in the second case. He regards the optic neuritis in both as unmistakably a manifestation of toxic action.

Berliner klinische Wochenschrift

December 4, XLVIII, No. 49, pp. 2193-2236

86 *Paget's Disease of the Nipple a Malignant Process. (Zum Wesen der Paget'schen Krankheit.) C. Kreibich.
87 *Heart Defects and Pregnancy. (Herzfehler und Schwangerschaft.) T. Rosenthal.
88 *Pseudoleukemia with Necropsy. (Zur Lehre von der Hodgkin'schen Krankheit.) E. Rosenfeld.
89 Parenephritis. M. Zondek.
90 *Ureter Stones. (Zur Therapie der Ureterstein e.) F. Weisz.
91 *Two Cases of Toxic Optic Neuritis After Salvarsan. (Zwei bemerkenswerte Augenerkrankungen nach Salvarsan.) C. Cohen

Correspondenz-Blatt für Schweizer Aerzte, Basel

November 20, XLI, No. 33, pp. 1137-1184

95 Serodiagnosis of Syphilis. (Untersuchungen über die Brauchbarkeit der von Dungern'schen Reaktion für die Serumdiagnostik der Syphilis.) O. Stiner.

Deutsche medizinische Wochenschrift, Vienna

November 30, XXXVII, No. 48, pp. 2209-2264

96 *Abnormal Development of Embryos After Radium Exposures. (Das Radium als Hilfsmittel für entwicklungsphysiologische Experimente) O. Hertwig.
97 *General Principles for Treatment of Jaundice. (Die Behandlung des Ikterus.) G. Hoppe-Seyler.
98 *Negative Differential Atmospheric Pressure in Treatment of Circulatory Disturbances. (Ziele und Erfolge der Behandlung von Kreislaufstörungen mit Unterdruckatmung.) O. Bruns.
99 Nucleoproteid from the Thyroid in Treatment of Exophthalmic Goiter. (Ueber die Wirkung des im Schilddrüsenkolloid enthaltenen Nucleoproteides bei Morbus Basedowii.) A. Tschikste.
100 The Crossed Toe Reflex. (Ueber den gekreuzten Zehenreflex, im besondern über seine klinische Bedeutung.) O. Maas.
101 Induced Unilateral Paralysis of the Diaphragm in Treatment of Pulmonary Lesions. (Künstliche Zwerchfellähmung bei schweren chronischen einseitigen Lungenerkrankungen.) Stuertz
102 *Diagnosis of Foreign Bodies in Air Passages and Esophagus. (Zur Diagnose von Fremdkörpern in den tieferen Luftwegen und in der Speiseröhre.) F. Reinking.
103 *Venesection Plus Saline Infusion in Treatment of Skin Disease. (Aderlass und Kochsalzinfusion in der Dermatologie.) J. Simon.
104 Salvarsan in Japan; 331 Cases. (Unsere Erfahrungen über die Salvarsanbehandlung im Laufe eines Jahres.) K. Dohi and T. Tanaka.
105 Salvarsan and Quinin in Pemphigus. (Salvarsan- und Chinin-Behandlung des Pemphigus vulgaris.) H. Merz.
106 Recent Progress in Physiologic and Medical Chemistry. (Fortschritte der physiologischen und medizinischen Chemie in den letzen Jahren.) Brigl.

107 Recent Progress in Roentgentherapy. (Fortschritte auf dem Gebiete der Röntgentherapie.) J. Wetterer.
108 Prophylaxis of Infectious Diseases in Infant Wards. (Die Verhütung und Bekämpfung der Infektionskrankheiten in geschlossenen Säuglingsanstalten.) J. Cassel.

96. **Radium in Experimental Embryology.**—Hertwig gives a number of illustrations of the deformities resulting from exposure of the eggs or spermatozoa to radium rays.

97. **Treatment of Jaundice.**—Hoppe-Seyler discusses the general principles of treatment of this symptom, emphasizing the importance of the search for its cause and the necessity for supervision of the diet and mode of life. Even apparently insignificant affections of the bile passages may lead to severe disturbances in the liver, even to acute atrophy. Rest for the liver as long as there is jaundice is extremely important, especially when there is fever. The diet should not stimulate liver functioning and should take into account the changed conditions in regard to digestion in the intestines from lack of bile.

98. **Negative Pressure in Treatment of Cardiovascular Disturbances.**—Bruns calls attention to the aspiration of venous blood into the interior of the thorax when the pressure is below that of the general atmospheric pressure, and the importance of this in treatment of disturbances in the circulation of the right heart due to insufficiency of the respiratory apparatus from rigidity of the chest walls, induration of the pleura or kyphoscoliosis, or the so-called emphysema or asthma heart. The negative pressure is also useful in treatment of asthma by combating the overdistention of the lungs. He has also found it valuable as a means of exercising and strengthening the heart in certain forms of weakness of the myocardium. The negative pressure procedure can also be applied as a test for the functioning of the heart.

102. **Foreign Bodies in the Upper Air Passages and the Esophagus.**—Reinking considers it remarkable that more general use is not made of bronchoscopy and esophagoscopy, while too much reliance is placed on roentgenoscopy, percussion and auscultation, and too little credence given the patient's statements. He reports three instructive cases in which the presence of the foreign body had been denied by previous examiners while direct visual inspection revealed it at once. One patient was an elderly man who applied for a "remedy for his cough;" only by persistent questioning was it finally learned that his cough had come on after he had "swallowed something the wrong way" some time before. Although there were no objective findings, yet the bronchoscope showed three slivers of bone which were readily removed. Reinking cites Leyden's two cases, both in medical men, one succumbing to a supposed tuberculous lesion in the lung which necropsy revealed to be merely the local reaction to a scrap of bone in the lung. There was no history of the patient having aspirated a foreign body. In the second case a shirt stud was coughed up after years of a gangrenous putrid process.

103. **Venesection Plus Saline Infusion in Treatment of Skin Diseases.**—Simon is enthusiastic over the benefits possible by "lavage of the organism," washing out toxins by withdrawing 100 or 200 c.c. of blood from a vein and then infusing without removing the cannula, 300 or 700 c.c. of a 0.9 per cent. salt solution, repeating this from three to six times at intervals of five or six days. No by-effects to cause uneasiness were observed on the part of the kidneys or vascular system in any case, so that he does not hesitate to apply this treatment even to the elderly, up to the age of 73. No fever was observed, and the technic can thus be applied to out-patients. The best results were obtained in pruritus, urticaria, furunculosis and eczema. The method has no contra-indications, he declares, and it is most effectual perhaps in the affections which are most refractory to other measures. It is not unfailingly successful, especially in the localized pruritus of the elderly. The most striking success in his 100 cases was that of a young merchant who had suffered from infancy from intense pruritus universalis, rebellious to all measures and incapacitating for all business. Relief followed the first infusion and the pruritus was permanently cured by the third.

Medizinische Klinik, Berlin

December 3, VII, No. 49, pp. 1879-1920

109 General Principles for Treatment of Gonorrhea in Women. (Zur Bewertung und Behandlung der Gonorrhoe der Frau.) A. Martin.
110 *Morbid Lack of Thirst. (Ueber Oligodypsie.) R. Schmidt.
111 *Abortive Forms of Myxedema. (Forme fruste des Myxödems.) A. Saenger.
112 Tumor in Optic Thalamus and Caudate Nucleus. (Zur Kasuistik der Sehhügel-Schweifkern-Geschwülste.) A. Pilez.
113 High Frequency Electric Currents in Therapeutics. (Die Behandlung mit Hochfrequenzströmen.) A. Laqueur.
114 *Osteomyelitis of the Scapula. M. Strauss.
115 Fatty Degeneration and Displaced Fat Tissue. (Moderne Anschauungen über Verfettung und Fettwanderung.) C. Kalserling.

110. **Morbid Lack of Thirst.**—Schmidt states that a patient three years ago mentioned that she never was thirsty, and since then he has encountered fourteen women and eight men who complain that they seldom or never feel a desire to drink any fluid. Nearly all were persons with an instable nervous system, either in the psychic sphere or in the vegetative system, especially in the digestive tract. There were no objective findings except that the stomach and intestines displayed a tendency to undue irritability and weakness. Constipation and flatulence were the rule. He thinks that this oligodipsia is of the same character as polydipsia, a neuropathic phenomenon. In some cases it may be traced to an oliguria and indicates diuretic measures. Some of the patients with oligodipsia did not perspire normally during the summer or under the influence of aspirin, and the lack of fluids seemed to modify the metabolic processes and induce retention of waste products, some of the patients complaining of pain in the joints and neuralgia; the condition may favor production of gall-stones. It is possible that the atonic stomach instinctively seeks to restrain ingestion of fluids to avoid distention.

111. **Incomplete Forms of Myxedema.**—Saenger declares that in many cases a vague condition due to defective functioning of the thyroid has been mistaken for nephritis, chlorosis, neurasthenia or hysteria, and ineffectually treated for years on this erroneous assumption. He reports eight cases in detail, the diagnosis in one confirmed by necropsy. They show that the condition may occur without the characteristic changes in the skin; in some cases these changes may be discovered on the mucosa while lacking in the skin, in others the skin may be puffy and of normal tint; in others red and congested. In three of the cases there was none of the usual sluggishness in thinking, feeling and moving, but rather the reverse, the patients bright and lively. In some cases the symptoms were merely those of neurasthenia, restlessness and vague headache. The absence of a palpable thyroid may often throw light on the puzzling syndrome, although a normal thyroid may be located so low as to be concealed by the sternum. In these incomplete forms of myxedema the symptoms seem to persist long unmodified; sometimes the more characteristic symptoms develop later. Differentiation is very important in these cases as thyroid treatment is simple and effectual. One patient was a girl of 19 who had complained for years of pains and weakness in the arms but nothing could be found to explain this. Her face was plump and ruddy, the skin apparently normal, but no trace of a thyroid could be palpated and thyroid treatment was commenced with prompt recovery of the normal use of the arms. On suspension of thyroid treatment the painful paresthesia in the arms returned but vanished again under thyroid treatment, since which time the patient has been free from disturbances. In a similar case in a woman of 48, the vasomotor form of neurasthenia was accompanied by puffiness of the face, headache and lassitude, all of which subsided under persistent thyroid treatment. In another case the symptoms of incomplete myxedema accompanied a tumor in the frontal lobe, and the thyroid was found totally atrophied. Only one of the patients was a man. He was 45 and complained of headache, lassitude and inability to concentrate his attention. There was slight tremor of the head and the tongue and palate were unusually thick, while nothing suggesting a thyroid could be detected on palpation. Courses of treatment for the supposed neurasthenia gave no relief. Under thyroid treatment the symptoms all subsided.

They returned again on its suspension, confirming the assumption of hypothyroidism. Others have called attention to thickening of the tongue and soft palate as a sign of myxedema.

114. **Osteomyelitis of the Scapula.**—Strauss expatiates on the necessity for early differentiation as this alone permits radical removal of the focus in time. Heyfelder and Bockenheimer have reported cases with a fatal outcome from the general infection which so often masks the local process in its deep and concealed site. Strauss' article is based on thirty-two cases, including six from recent literature and one from his own practice. The inflammation frequently starts at the spine of the scapula and spreads into the subscapular fossa. An abscess developing here may long escape detection as the patient lies on his other side and the abscess does not work out to the axilla. When it breaks into the supraspinous or infraspinous fossa, tenderness and swelling attract attention. Any pressure on the primary abscess is liable to lead to general infection. An early diagnosis is possible only by excluding other affections, especially deep phlegmon of the axilla or osteomyelitis of the ribs below the scapula and acute infectious processes in the shoulder. Circumscribed tenderness of the spine of the scapula and internal angle is instructive, as also circumscribed edema of the supraspinous or infraspinous fossa, and the tenderness when the finger is worked down through the posterior wall of the axilla to the lateral margin of the scapula, and the intense pain when the upper arm is rotated outward. The first acute onset is usually followed by a tedious, subacute phase, with gradual involvement of the rest of the scapula, and possibly of the ribs. In one of the two cases reported, partial evacuation of the focus was followed by gradual spread of the process, rendering necessary a series of operations in the course of two years before the girl of 13 was finally cured. The periosteum and muscles must be respected as much as possible in operating; an incision along the vertebral border and over the spine spares muscles and vessels more than any other technic yet applied, but the incision must vary with the location of the abscess. An incision above or below the spine interferes less with the regeneration of this part of the bone. A cushion in the axilla will aid in immobilizing the arm after the operation.

Münchener medizinische Wochenschrift

November 28, LVIII, No. 48, pp. 2537-2592

116 Roentgen-Ray Findings with Spastic Constipation. (Ueber objektive Befunde bei der spastischen Obstipation.) G. Singer and G. Holzknecht.

117 Reciprocal Relations Between Stomach and Large Intestine in Different Conditions in Regard to Shape, Contents and Position. (Die Wechselbeziehung zwischen Füllung, Form und Lage von Magen und Dickdarm.) F. M. Groedel and E. Schenck.

118 Fate of Phosphorus in the Food. (Versuche über den Nahrungsphosphor.) L. Böker, E. Duriach, W. Heubner, H. Stadler and H. Ulrich.

119 *Tuberculin in Diagnosis and Treatment of Tuberculosis. (Die spezifische Erkennung und Behandlung der Tuberkulose.) L. Saathoff.

120 Salvarsan in Relapsing Fever. (Rekurrens mit Salvarsan behandelt.) N. Svenson.

121 The Kidney in Scarlet Fever. (Zur Frage der Scharlachnephritis.) C. Leede.

122 Technic for Measuring Joints. (Zur Perimetrie der Gelenke.) E. Fritzsche.

123 *Criticism of Werner's Baden Cancer Statistics. (Zur badischen Krebsstatistik.) W. Weinberg.

124 *Fatal Paroxysmal Edema and Symmetrical Gangrene as Manifestations of a Neurosis of the Vessels. (Kasuistik über Angioneurosen.) F. Harbitz.

119. **Tuberculin in Diagnosis and Treatment of Tuberculosis.**—Saathoff emphasizes anew that the reaction to tuberculin is not a sign of tuberculosis but that it is merely a reaction showing the existence of an antibody, an Immunkörper. As the immune body does not develop without the presence of tuberculosis, the reaction is thus indirectly a sign of tuberculosis, but a negative response does not indicate that there is no tuberculosis. He calls attention to the great difference in the results he has obtained in treating the tuberculous according as they were hospital or sanatorium patients. Rapid cures were obtained in the hospital cases, while his sanatorium experience has been far less satisfactory. He explains this by the fact that the hospital tuberculous are generally robust young wage-earners, and they come to the hospital for treatment when the disease has roused from a latent to an active phase. All conditions thus favor the rapid improvement in the hospital environment. Sanatorium patients, on the contrary, are usually from the well-to-do classes and everything possible has been done for them at home before they come to the sanatorium. This same difference exists between private and contract practice in general. Koch's first success with tuberculin, which raised such flattering hopes, was obtained with hospital patients and it was not duplicated in private practice. Saathoff insists that tuberculin treatment on the whole is better suited for more rugged natures, for hospitals, public sanatoriums and lodge practice than for private practice among well-to-do. Under all conditions the outlook is better the earlier it is instituted, before the resisting powers have begun to ebb. By selecting the patients in this way, tuberculin will undoubtedly prove of great value, warding off chronic phthisis. But at the same time all the other methods, especially the physical, still retain all their usefulness and in many cases are the only means that will do any good.

123. Weinberg refers to the statistics reviewed in THE JOURNAL in Abstract 95, page 1954, Dec. 9, 1911.

124. **Acute Paroxysmal Edema.**—The special features of the case reported by Harbitz were the recurring attacks of edema in face, neck, larynx or lungs, and the history of similar attacks in a brother, father, grandfather and two of the latter's sisters. Necropsy revealed nothing to explain the edema. Harbitz ascribes it to an acute transient angioneurosis, which assumption explains further another, less severe familial case in his practice. It also throws light on the syndrome of symmetrical gangrene of which he reports a typical case. Sections of the amputated finger showed comparatively slight changes in the nerves and vessels except that the larger arteries were contracted, although otherwise apparently normal.

Therapie der Gegenwart, Berlin

December, LII, No. 12, pp. 529-576

125 Ovarian Hormone and Uterine Myomas. M. Henkel.

126 Treatment and Prophylaxis of Relapses in Malaria. (Die Therapie und Prophylaxe der Malariarückfälle.) A Plehn.

127 *Soap in Treatment of Cholelithiasis. (Zur Erkennung und Behandlung der Gallensteinkrankheit.) M. Mosse.

128 Alcoholic Beverages as Sedatives and as Stimulants to the Appetite. (Alkoholische Getränke als Hypnotica.) W. Sternberg.

129 Quinin as a Local Anesthetic. (Chinin als Lokalanästheticum.) E. Schepelmann.

130 Technic for Roentgen Exposures. (Einiges aus der Praxis der Röntgenbehandlung.) M. Fraenkel.

127. **Soap in Cholelithiasis.**—Mosse emphasizes the two facts that in certain cases of gall-stones, the knife is the only effectual means of cure, and that in certain other cases, a cure occurs without any treatment. Besides these, however, there is a group of cases in which the gall-stone trouble can be cured by stimulating the secretion of bile, and for this he thinks nothing surpasses a mixture of 10 or 15 gm. of medicinal soap with mucilage of acacia q. s. to make sixty pills; three pills daily. The pills can be supplemented by rectal injections of oil. This treatment is to be commenced on subsidence of the acute attack; during this, belladonna or atropin may be required. This soap treatment was introduced by Senator, and some experiments reported this year from Pawlow's clinic confirm, Mosse says, this cholagogue action of soap.

Virchows Archiv, Berlin

November, CCVI, No. 2, pp. 161-320

131 Foreign Body Giant Cells in Bronchiolitis. (Ueber eigenartige Fremdkörperriesenzellen bei Bronchiolitis obliterans.) K. Vogel. Commenced in No. 1.

132 Development of Fat Near and in the Lung. (Ueber Fettgewebs-Entwicklung an und in der Lunge.) W. Dohrn.

133 Tuberculous Plus Syphilitic Lesions in the Liver. (Fall von "Röhrentuberkulose" der Leber wahrscheinlich mit Syphilis kombiniert.) H. C. Hall.

134 Experimental Research on the Action of Meat Poisoning on the Internal Organs. (Wirkung des Botulismus-Toxins auf die inneren Organe.) W. Komotzki.

135 Functional Adaptation, etc., in Development of Vascular System and Skeleton. (Berichtigungen zu den Aufsetzen R. Thomas "Ueber Histomechanik des Gefässsystems und die Pathologie der Angiosklerose," sowie über "Beitrag zur Histologie des Skeletts, usw.") W. Roux.

136 Laws Regulating Growth of the Skull. (Die Spannung der Schädelwand.) R. Thoma.

137 Proliferation of Heterotopic Epithelium in Chronic Gastritis; Two Cases. E. A. Hallas.
138 The Cyclic Changes in the Mammalian Ovary. (Der normale und pathologische Zyklus im Ovarium des Säugetiers.) L. Loeb.

Wiener klinische Wochenschrift, Vienna

November 30, XXIV, No. 48, pp. 1659-1690

139 The Diathesis. (Ueber Diathesen, Dyskrasien und Konstitutionen.) R. Schmidt.
140 Origin of Salvarsan Fever. (Zur Kritik der Ansichten über die Entstehung des Salvarsanfiebers.) L. Arzt and W. Kerl.
141 Capillary Test of Viscosity of Milk. (Vergleichende Viskositätsbestimmungen der Milch mit Hilfe ihrer kapillären Steighöhe.) A. Kreidl and E. Lenk.

Zeitschrift für Kinderheilkunde, Berlin

III, No. 3, pp. 191-312. Last indexed October 14, p. 1334

142 *Lactation in Virgins. (Ueber virginelle Lactation.) M. Pfaundler.
143 Atrophy of Certain Muscles as Cause of Lordotic Albuminuria. (Juvenile Dystrophie und lordotische Albuminurie im Kindesalter.) E. Ebstein.
144 Overfeeding and Convulsions. (Ueberfütterung und Krämpfe.) E. Ebstein.
145 Anaphylaxis of Serum Sickness. (Zur anaphylaktischen Analyse der Serumkrankheit.) O. Witzinger.
146 Determination of Actual Size of Infants. (Ueber eine Methode zur Bestimmung des Volumens bei Säuglingen) K. Oppenheimer.
147 Growth and Osmotic Pressure in Young Dogs. (Wachstum und osmotischer Druck bei jungen Hunden.) P. Schulz.
148 Amyotrophy Plus Obesity in Young Children; Two Cases. (Zur Frage der frühinfantilen Amyotrophien und einer sie begleitenden "endogen-" Fettsucht.) T. Gott and H. Schmidt.
149 Glycocoll in the Urine of New-Born Infants. (Vorkommen von Glykokoll im Harn des Neugeborenen.) A. v. Reuss.
150 Temperature of Infant's Skin. (Beobachtungen über Hauttemperaturen der Säuglingen.) A. Mendelssohn.
151 Contents of Vaccine Pustule. (Der Inhalt der Vaccinepustein.) J. W. Rosenfeld.

142. **Lactation in Virgins.**—Pfaundler states that a fluid was sent to him for chemical examination, which his tests showed to be actual cow's milk although it was derived from a 2-year-old heifer that had never been covered. Some calves had been in the habit of sucking its teats and this had stimulated true lactation in time. He reviews the cases on record of lactation in virgins and the mechanism of the phenomenon, remarking that the milk glands have been trained to secretion through countless generations so that occasionally an individual is encountered in whom the lacteal glands start functioning without the ordinarily indispensable specific stimulus.

Zentralblatt für Chirurgie, Leipsic

December 9, XXXVIII, No. 49, pp. 1593-1624

152 *Indirect Eliciting of Pain in Appendicitis. (Bedeutung des indirekten Druckschmerzes bei Appendicitis.) E. S. Perman.

152. **Indirect Eliciting of Pain in Appendicitis.**—Perman palpates the left iliac fossa on suspicion of appendicitis, and has found that pressure on the left side induces pain at McBurney's point in case the appendix is much diseased and otherwise not. The pain thus indirectly induced at McBurney's point occurs most distinctly when the left side is lightly pushed in towards the right side, the patient breathing naturally, the abdominal muscles relaxed. He always prepares to operate when he finds this indirect pain, and he always found it accompanied by severe pathologic changes in the appendix or close vicinity or both, even when there was no rigidity of the abdominal wall. He has found this sign positive also in cholecystitis with severe lesions, as also in a limited experience with gynecologic affections. Perman interprets this indirect sign differently from Rovsing.

Zentralblatt für Gynäkologie, Leipsic

December 9, XXXV, No. 49, pp. 1657-1680

153 *Eclampsia. (Zur Eklampsiestatistik.) Lichtenstein. (Versuch einer mechanischen Theorie der Eklampsie.) A. J. Jarzew.
154 *Chorea of Genital Origin. (Chorea genitalen Ursprunges.) L. M. Bossi.

153. **Mechanical Theory of Eclampsia.**—Jarzew explains eclampsia as the result of accumulation of globulins in the blood with consequent thickening of the blood, this accumulation being due to the abrupt cessation of the functioning of the placenta and thus cessation of consumption of the albumin in the blood. He explains in detail the various premises on which he bases this theory: The stagnation of the thick blood increases the pressure in the arteries until the vasomotor center feels the influence of it and induces spasmodic contractions of the arteries, with resulting ischemia. This ischemia amply explains the symptoms of eclampsia and also the efficacy of the Stroganoff sedative method of treatment, by its reducing the excitability of the vasomotor center and thus warding off the spasm of the vessels. It also explains the efficacy of venesection (or, better yet,, drawing blood directly from an artery). It is possible that an accumulation of globulins in the blood may be responsible also for the symptoms observed in uremia.

154. **Chorea of Genital Origin.**—Bossi reports a case of endometritis with retrodisplacement of the uterus and laceration of the cervix after delivery of a seven-months fetus. The patient was only 18 and severe chorea minor developed, with irritability, insomnia and partial loss of memory. Four months after delivery Bossi curetted the uterus, did a plastic operation on the cervix, and straightened the uterus with a pessary. In two days marked improvement was evident and the patient had soon entirely recovered. Bossi cites the case as evidence of the importance of genital lesions in the causation of nervous and mental disease in some cases. He is convinced that if the cervicitis had been cured during the pregnancy, there would have been no reason why the child could not have been carried to term, and the patient would have been spared her four months of trouble.

Gazzetta degli Ospedali e delle Cliniche, Milan

November 26, XXXII, No. 142, pp. 1499-1514

155 Sanitary Conditions in Tripoli. (Lettere sanitarie da Tripoli.) L. Dozzi.

November 28, No. 143, pp. 1515-1522

156 *Distomiasis and Its Treatment. (La distomatosi e sua cura.) A. Borini.

156. **Treatment of Distomiasis.**—Borini states that the different varieties of distoma yield to treatment with ethereal extract of male fern or thymol, and he relates experimental experiences which confirm the possibility of this. The parasites were invariably expelled in the moderately severe cases; the treatment failed to cure only those animals that were in advanced cachexia. The distoma is sometimes associated with the hookworm or other helminths. As the distoma usually seeks by preference the bile apparatus, it may carry infection with it from the intestines and set up a cholecystitis or pancreatitis.

Policlinico, Rome

November, XVIII, Surgical Section No. 11, pp. 481-528

157 *Varices and Their Treatment. (Varici e loro trattamento. Considerazioni sopra 150 casi operati variamente.) O. Cignozzi.
158 Functioning of the Kidneys After Ligation of Its Vessels. (Ricerche sperimentali sulle variazioni della funzionalita renale, dopo la legatura dell'arteria e della vena emulgente.) S. Marinacci. Commenced in No. 10.

157. **Varices and Operative Treatment.**—Cignozzi reports the outcome in 150 cases in which various operative technics were applied. The ultimate outcome has proved much better in the eighty-five cases in which the entire saphenous vein, internal and external, was removed. This is the only measure which guarantees absolutely against recurrence while the patients are freed from all disturbances at once. He gives a number of illustrations of the outcome, showing the linear cicatrix from ankle to hip.

Norsk Magazin for Lægevidenskaben, Christiania

December, LXXII, No. 12, pp. 1169-1344 and Supplement

159 *Duodenal Ulcer. (Om ulcus duodeni og dets kirurgiske behandling.) H. Wille.
160 *Gastric Cancer and Results of Operative Treatment. (Om den operative behandling av carcinoma ventriculi og dens resultater.) N. Paus.
161 *Pericolitis. K. Andersen.
162 The Most Important Manifestations of Degeneracy. ("Giv en oversigt over de vigtigste degenerationsprocesser.") S. Widerøe.
163 Removal of the Eyeball Under Local Anesthesia of the Ciliary Ganglion. (Enucleatio et Exenteratio bulbi i regionær anæstesi ad modum Elsching-Löwenstein.) T. Gunnufsen.
164 *Congenital Fistulas in the Neck; Twenty-Three Cases. (Om medfødte halsfistler og endel med disse beslegtede anomalier.) F. Leegaard.

159. **Duodenal Ulcer.**—Wille reports six cases from his practice last year and states that signs of duodenal ulceration were found at necropsy in 7 of the 4,100 cadavers examined

during the last ten years at the Ullevaal hospital; signs of ulceration in the stomach were found in thirty-one cases. He compares his data with those published by Mayo and other surgeons, commenting on the apparent comparative frequency of duodenal ulcer in America and on the large preponderance of men among the patients. Syphilis could not be incriminated in his six cases. The difficulty in healing and the dangerous complications liable render duodenal ulcer a very serious affection. To date we can estimate that from 80 to 90 per cent. of the patients are permanently cured by operative treatment while the operative mortality is 1 or 2 per cent. In four of his cases he made a posterior gastro-enterostomy alone and three of the patients have been free from symptoms since. One has still slight symptoms. In the fifth case he sutured in the ulcer before doing the gastro-enterostomy.

160. **Gastric Cancer.**—Paus tabulates the details of forty-eight cases of gastric cancer in which operative treatment was applied and the outcome later determined, out of 100 patients with gastric cancer. In twenty-two of the other cases merely an exploratory laparotomy was done, and even this was impracticable in thirty others; in twenty-three of the others merely a palliative gastro-enterostomy was done; in only twenty-five cases did the prospects justify radical removal of the growth. The patients survived after the gastro-enterostomy for an average of six months and twenty-three days, the range being from three weeks to twenty-one months. Four died of the twenty-five patients whose stomachs were resected; one from pneumonia; thirteen have died later, after survivals of from nearly one to eight years, all but one succumbing to recurrence after an interval of complete health ranging from a few months to over six years. Eight of the patients are in good health to date, from nine months to nearly eleven years since the operation, two for seven years and one for two years. Five of the patients treated by resection developed recurrences later than three years, but 36.8 per cent. of all the patients operated on lived for more than three years and 26.3 per cent. are free from recurrence. Omitting the operative mortality there are 43.8 per cent. living after the three-year interval and 31.3 per cent. are free from recurrence. The patients had had symptoms on an average for seven months before the operation, some for over a year. One patient had been treated for four months with internal measures alone although a tumor was palpable. Paus insists that operative treatment should be the first measure to be applied, not the last.

161. **Pericolitis.**—Andersen describes the clinical picture which accompanies inflammation of the peritoneal investment and the immediate vicinity of the cecum and ascending colon with the appendix intact. Treatment must be operative, he says, to be effectual.

164. **Congenital Fistulas in the Neck.**—Leegaard has encountered eleven cases of this kind and knows of twelve others in the practice of his Norwegian colleagues. In three of his cases with a fistula in the side of the neck, the children were brothers and sisters and the parents were cousins. The children in this family also had adenoid vegetations. In another case there were two fistulas, in another the fistula opened outward below the clavicle. In one case the fistula proved to be 12.5 cm. long although it could not be probed for more than half this distance. One child had a fistula in both neck and ear. In only three cases was the fistula in the median line. Leegaard discusses these congenital fistulas from various standpoints. Treatment is rarely necessary but if so, injection of a caustic fluid may obliterate the passage. One case is on record in which fatal poisoning followed injection of a mercurial salt. The incomplete fistulas respond better to these injections. The fluid must reach the entire epithelial lining and good results have been obtained in some cases. Operative treatment may be required when there is much dilatation and secretion with pain, fever, etc. showing retention. If the passage has to be resected, it should be loosened and removed with blunt instruments.

Ugeskrift for Læger, Copenhagen

November 30, LXXIII, No. 48, pp. 1757-1806

165 *Cholelithiasis. V. Scheel.

165. **Cholelithiasis.**—Scheel discusses the prevalence and differentiation of gall-stones and compares his own experiences with those of others in this line. During the last four years the necropsies at the general hospital disclosed gall-stones in 406 of 2,753 cadavers, that is, in 15 per cent. The proportions in the male and female cadavers were the same only that the corresponding percentages in the men were at an age twenty years later. Evidently the factors which cooperate to induce gall-stones are the same in both men and women, only that they act later in men. Pregnancy and tight lacing, therefore, do not have the causal importance formerly ascribed to them. Scheel is inclined to ascribe a favoring influence to the changes in metabolism which accompany the cessation of the sexual functions in both men and women. When this coincides with a casual infection of the biliary passages there is liable to be a production of gall-stones. This assumption explains why there is only a single generation of gall-stones. In his 406 cases the women's curve rises from 5 to 10 per cent. between the ages of 20 and 30, then to 15 per cent. between 30 and 40, and then it jumps to 25 per cent. before 50, and then to 35 per cent. by the age of 70; the men's curve parallels it almost perfectly only adding 20 years to each age. In 67 per cent. the bile passages were apparently not pathologic—in 74 per cent. of the cases with multiple stones and in 54 per cent. with single stones. If there had been an infectious process it had healed without leaving a trace. In 75 of the 133 pathologic cases there were evidences of an old, practically healed cholecystitis of the gall-bladder; the walls were thickened or shriveled, with more or less adhesions. This chronic phase is equivalent to normal conditions as no clinical symptoms are observed. There was cancer in the gall-bladder in five cases, and eight patients died from postoperative complications, such as pneumonia or embolism.

Correction.—In Abstract 67, page 1728, in THE JOURNAL, Nov. 18, 1911, omit "twice the volume of" in the third line from the bottom of the page. The sentence should read: "After thirty minutes the mixture is diluted with twice the volume of water and again, etc."

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

DIE EXPERIMENTELLE PHARMAKOLOGIE ALS GRUNDLAGE DER ARZNEIBEHANDLUNG. Von Dr. Hans H. Meyer, Wien, und Dr. R. Gottlieb, Heidelberg, Professoren der Pharmakologie. Second Edition. Paper. Price, $3.50 and postage. Pp. 554, with 65 illustrations. New York: Rebman Company, 1911.

NACHWEIS UND BESTIMMUNG VON GIFTEN AUF BIOLOGISCHEN WEGE. Von Dr. Hermann Führer, Privatdozenten für Pharmakologie an der Universität Freiburg i. B. Paper. Price, $2.25 and postage. Pp. 176, with 89 illustrations. New York: Rebman Company, 1911.

POSTGRADUATE MEDICAL WORK UNDER THE PATRONAGE OF THE FREE ORGANIZATION FOR MEDICAL COURSES AT THE I. R. UNIVERSITY OF VIENNA. Third Edition. Paper. Pp. 144. Can be obtained free from Rebman Company, New York.

CASE HISTORIES IN MEDICINE, ILLUSTRATING THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF DISEASE. By Richard C. Cabot, M.D. Second Edition. Cloth. Price, $3. Pp. 295. Boston: W. M. Leonard, 1911.

APPENDIX TO THIRD REPORT OF THE ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON. Paper. Price, 4 shillings. Pp. 489. London: Wyman & Sons, Fetter Lane, E. C., 1911.

SWAMP FEVER IN HORSES. By L. Van Es, E. D. Harris and A. F. Schalk. Government Agricultural Experiment Station of North Dakota, Bulletin No. 94. Paper. Fargo, N. D., 1911.

A HANDBOOK OF HEALTH. By Woods Hutchinson, A.M., M.D. Cloth. Price, $1.25. Pp. 330. Boston: Houghton Mifflin Company, 1911.

TWENTY-NINTH ANNUAL REPORT, FRIENDS' HOME FOR CHILDREN, PHILADELPHIA, 1910.

THIRTY-SIXTH ANNUAL REPORT, FREE HOSPITAL FOR WOMEN, BROOKLINE, MASS.

SEVENTEENTH ANNUAL REPORT, ST. VINCENT'S HOSPITAL, WORCESTER, MASS, 1910.

REPORT OF PRESIDENT OF BOARD OF HEALTH OF HAWAII, 1911. Honolulu.

HISTORY OF THE HOUSE OF HOPE. By Mark M. Savidge. Omaha.